

UNCLASSIFIED

AD NUMBER
AD870200
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; MAY 1970. Other requests shall be referred to Army Atmospheric Sciences Office, White Sands Missile Range, NM.
AUTHORITY
usaec notice, 13 sep 1971

THIS PAGE IS UNCLASSIFIED

AD No. \_\_\_\_\_  
DDC FILE COPY

AD870200

THIS DOCUMENT IS SUBJECT TO SPECIAL EXPORT CONTROLS AND EACH TRANSMITTAL TO FOREIGN GOVERNMENTS OR FOREIGN NATIONALS MAY BE MADE ONLY WITH PRIOR APPROVAL OF ATMOSPHERIC SCIENCES OFFICE, WHITE SANDS MISSILE RANGE, NEW MEXICO.

DR-523  
May 1970

AD

20  
CB

METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV-94  
NIKE-HYDAC STV-93  
(5 May 1970)

BY

LEN E. CARTER

ATMOSPHERIC SCIENCES OFFICE  
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

DDC  
RECEIVED  
JUN 16 1970  
RECEIVED

61

ACCESSION NO.	
CPSTI	WHITE SECTION <input type="checkbox"/>
SPC	DIFF SECTION <input checked="" type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
1ST	DIST. AVAL. 2nd/3rd SPECIAL
2	

### DISPOSITION INSTRUCTIONS

Destroy this report when it is no longer needed. Do not return it to the originator.

### DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV-94  
NIKE-HYDAC STV-93  
(5 May 1970)

By

Len E. Carter

DR-523

May 1970

DA Task 1T665702D127-02

ATMOSPHERIC SCIENCES OFFICE  
WHITE SANDS MISSILE RANGE, NEW MEXICO

This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of Atmospheric Sciences Office, White Sands Missile Range, New Mexico.

#### ABSTRACT

Meteorological data gathered for the launching of NIKE-HYDAC, STV-94 and NIKE-HYDAC, STV-93, are presented for the Space and Missile Systems Organization, AFMDC, Holloman Air Force Base, New Mexico, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.

# CONTENTS

	PAGE
ABSTRACT -----	111
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES	
I. Theoretical Rocket Performance Values, Nike-Hydac STV-94 ----	2
II. Theoretical Rocket Performance Values, Nike-Hydac STV-93 ----	3
III. Ballistic Factors, Nike-Hydac STV-94 -----	4
IV. Ballistic Factors, Nike-Hydac STV-93 -----	5
V. Anemometer Wind Speed and Direction, Nike-Hydac STV-94 -----	6
VI. Anemometer Wind Speed and Direction, Nike-Hydac STV-93 -----	7
VII. Pilot-Balloon-Measured Wind Data, Nike-Hydac STV-94 -----	8
VIII. Pilot-Balloon-Measured Wind Data, Nike-Hydac STV-93 -----	10
IX. Rawinsonde-Measured Wind Data, Nike-Hydac STV-94 -----	12
X. Rawinsonde Measured Wind Data, Nike-Hydac STV-93 -----	13
XI. WSD Significant Level Data (Release Time: 0500 MDT) -----	14
XII. WSD Upper Air Data (Release Time: 0500 MDT) -----	15
XIII. WSD Mandatory Levels (Release Time: 0500 MDT) -----	22
XIV. WSD Significant Level Data (Release Time: 0800 MDT) -----	23
XV. WSD Upper Air Data (Release Time: 0800 MDT) -----	25
XVI. WSD Mandatory Levels (Release Time: 0800 MDT) -----	30
XVII. WSD Significant Level Data (Release Time: 1100 MDT) -----	31
XVIII. WSD Upper Air Data (Release Time: 1100 MDT) -----	32

v

**Preceding Page Blank**

CONTENTS (CONT)

	PAGE
XIX. WSD Mandatory Levels (Release Time: 1100 MDT) -----	49
XX. Impact Prediction Data, Nike-Hydac STV-94 -----	50
XXI. Impact Prediction Data, Nike-Hydac STV-93 -----	52

## INTRODUCTION

Nike-Hydac, STV-94, was launched from Launch Complex 33, left boom of L-361, White Sands Missile Range (WSMR), New Mexico, at 0800 hours MDT, 5 May 1970.

Nike-Hydac, STV-93, was launched from Launch Complex 33, right boom of L-361, White Sands Missile Range (WSMR), New Mexico, at 1100 hours MDT, 5 May 1970.

Meteorological data used in conjunction with theoretical calculations to predict rocket impact were collected by the Meteorological Support Technical Area, Atmospheric Sciences Office (ASO), WSMR, New Mexico. Ballistics Meteorologists for this firing were Gordon Dunaway and Len E. Carter.

## DISCUSSION

Wind data for the first 216 feet above the surface were obtained from a system composed of five Aerovanes mounted on a 200-foot tower and cabled to component wind indicators.

From 216 to 4,000 feet above the surface, wind data were obtained from T-9 Radar tracked balloon ascents.

Temperature, pressure, and humidity data, along with upper wind data from 4,000 to approximately 100,000 feet above the surface, were obtained from standard rawinsonde observations.

Mean wind component values in each ballistic zone were determined from vertical cross sections by the equal-area method.

Theoretical rocket performance values and wind-weighting values as a function of altitude were provided by ASO and are the basis for the data appearing in Tables I and II.



PAYLOAD		264	Pounds
CORIOLIS DISPLACEMENT	WEST	4.2	Miles
SECOND-STAGE IGNITION	TIME	20.0	Seconds
	ALTITUDE	36,025	Feet MSL
PEAK	TIME	224.2	Seconds
	ALTITUDE	643,625	Feet MSL
UNIT WIND EFFECT	RANGE	2.3	Miles/MPH
	CROSS	2.3	Miles/MPH
			Miles/MPH
TOWER TILT EFFECT		12.7	Miles/Degree

TABLE I. . . THEORETICAL ROCKET PERFORMANCE VALUES  
NIKE-HYDAC STV-94

PAYLOAD		225	Pounds
CORIOLIS DISPLACEMENT	WEST	4.2	Miles
SECOND-STAGE IGNITION	TIME	20.0	Seconds
	ALTITUDE	35,000	Feet MSL
PEAK	TIME	232	Seconds
	ALTITUDE	702,117	Feet MSL
UNIT WIND EFFECT	RANGE	2.35	Miles/MPH
	CROSS	2.35	Miles/MPH
			Miles/MPH
TOWER TILT EFFECT		13.8	Miles/Degree

TABLE II. THEORETICAL ROCKET PERFORMANCE VALUES  
NIKE-HYDAC STV-93

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
11- 60	.1291
60- 108	.0646
108- 148	.0570
148- 184	.0476
184- 216	.0278
216- 300	.0783
300- 400	.0721
400- 600	.0945
600- 800	.0586
800-1000	.0463

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
1000- 1400	.0602
1400- 2000	.0572
2000- 2500	.0293
2500- 3000	.0215
3000- 3500	.0082
3500- 4175	.0030
4175-11000	-.0156
11000-16000	-.0107
16000-21000	-.0104
21000-26000	-.0104

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
26000-32025	-.0047
32025-34000	.0720
34000-36000	.0360
36000-41000	.0434
41000-46000	.0171
46000-51000	.0092
51000-56000	.0063
56000-66000	.0104
66000-71089	.0013

TABLE XXI. BALLISTIC FACTORS  
NIKE-HYDAC STD-94

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
11- 60	.1265
60- 108	.0844
108- 148	.0535
148- 184	.0410
184- 216	.0235
216- 300	.0392
300- 400	.0520
400- 600	.0790
600- 800	.0530
800-1000	.0407

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
1000- 1400	.0742
1400- 2000	.0669
2000- 2500	.0341
2500- 3000	.0227
3000- 3500	.0143
3500- 4000	.0051
4000- 5000	-.0051
5000- 9000	-.0117
9000-13000	-.0168
13000-21000	-.0160

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
21000-26000	-.0096
26000-31000	-.0048
31000-36000	.1288
36000-41000	.0348
41000-46000	.0256
46000-51000	.0152
51000-56000	.0093
56000-61000	.0016

TABLE IV.. BALLISTIC FACTORS  
NKK-NYDAC STV-93

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR									
	1 0600 MDT		2 0630 MDT		3 0700 MDT		4 0715 MDT		5 0730 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	0.0	0.0	0.0	4.0W	0.0	4.0W	0.0	3.0W	0.0	2.0W
2	0.0	0.0	0.0	2.0	2.0N	3.0	0.0	3.0	1.0N	3.0
3	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	1.0	2.0
4	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
5	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	1.0	2.0

6

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR							
	6 0740 MDT		7 0750 MDT		8 0755 MDT		9 0800 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	2.0N	0.0	0.0	0.0	0.0	0.0
4	2.0N	2.0W	2.0	2.0W	0.0	0.0	0.0	0.0
5	2.0	2.0	2.0	1.0	2.0N	0.0	0.0	0.0

TABLE V. ANEMOMETER WIND SPEED AND DIRECTION  
NIKE-HYDAC STV-1/4

\* Heights corresponding to Aerovane Numbers: 1 - 35 Feet 3 - 128 Feet 5 - 200 Feet  
2 - 88 Feet 4 - 168 Feet

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR									
	1 0900 MDT		2 0930 MDT		3 1000 MDT		4 1015 MDT		5 1030 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	0.0	4.0E	3.0N	3.0E	0.0	0.0	4.0N	2.0E	0.0	0.0
2	0.0	3.0	3.0	3.0	2.0N	2.0E	3.0	3.0	0.0	0.0
3	0.0	4.0	3.0	4.0	2.0	2.0	4.0	4.0	0.0	0.0
4	2.0N	4.0	4.0	5.0	1.0	2.0	4.0	5.0	0.0	0.0
5	2.0	4.0	2.0	4.0	1.0	4.0	4.0	4.0	0.0	0.0

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR							
	6 1040 MDT		7 1050 MDT		8 1055 MDT		9 1100 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	2.0N	1.0E	4.0N	2.0W	0.0	0.0	2.0N	2.0W
2	3.0	1.0	4.0	2.0	0.0	2.0W	2.0	2.0
3	4.0	2.0	4.0	2.0	0.0	2.0	2.0	3.0
4	4.0	2.0	7.0N	2.0	2.0N	2.0	2.0	2.0
5	4.0	2.0	7.0	1.0	4.0	2.0	0.0	0.0

TABLE VI. ANEMOMETER WIND SPEED AND DIRECTION  
NIKE-HYDAC STV-93

\* Heights corresponding to Aerovane Numbers: 1 = 35 Feet 3 = 128 Feet 5 = 200 Feet  
2 = 88 Feet 4 = 168 Feet



LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR			
	8		9	
	0755 MDT		0800 MDT	
	N-S	E-W	N-S	E-W
216-- 300	1.0N	0.5E	2.5N	1.0E
300-- 400	1.0	0.5	2.0	1.5
400-- 600	2.0	0.5	2.5	3.5
600-- 800	2.0S	2.5	2.5S	5.0
800-- 1000	4.5	4.0	4.5	4.0
1000-- 1400	3.0	3.0	2.0	2.5
1400-- 2000	5.5	0.5	5.0	0.0
2000-- 2500	10.0	2.0	11.0	1.5E
2500-- 3000	19.0	4.5	18.0	4.5
3000-- 3500	22.0	6.0	23.5	5.5
3500-- 4000	17.0	7.5	19.0	7.0

TABLE VII. PILOT-BALLOON-MEASURED WIND DATA (CONT)  
NIKE-HYDAC STV-94



LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR													
	1		2		3		4		5		6		7	
	0900 MDT		0930 MDT		1000 MDT		1015 MDT		1030 MDT		1040 MDT		1050 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216-300	1.0N	4.5E	2.0S	3.5E	2.0N	3.5E	2.0N	3.5E	5.0N	1.0W	3.0N	1.0E	4.0N	0.0
300-400	1.0	5.5	1.0S	4.5	3.0	3.5	2.0	2.5	3.0	0.5E	2.0	1.0	0.0	1.0E
400-600	1.0S	3.5	2.0N	5.5	1.0	4.0	2.0	2.5	0.0	1.0	1.0S	2.0	3.0N	1.0
600-800	0.5S	4.5	2.0S	6.5	0.0	3.0	1.0	3.0	1.0S	1.5	2.0	5.0	3.0	0.5
800-1000	3.0	3.0	4.0	6.5	0.0	3.0	0.0	2.5	1.0	3.0	0.0	5.5	2.0	0.5W
1000-1400	5.5	1.0W	4.0	2.5	3.5S	0.0	1.5S	1.5	2.0	2.5	1.0N	4.0	2.0	1.0
1400-2000	8.5	1.0E	7.0	2.0W	6.0	0.0	5.0	0.0	3.0	2.5	4.0S	5.0	4.0	2.0E
2000-2500	10.5	3.5	11.0	3.0E	10.0	3.0E	9.0	4.0E	10.0	6.0	8.0	7.0	0.0	5.0
2500-3000	19.0	3.0	19.0	3.0	17.0	4.0	17.0	4.5	16.0	4.0	16.0	3.5	14.0S	6.0
3000-3500	23.5	4.5	22.0	4.5	23.0	5.0	22.0	4.0	22.0	3.5	20.0	3.0	19.0	3.5
3500-4000	23.5	6.0	20.0	5.0	20.0	5.0	22.0	4.0	22.0	4.0	22.0	6.0	22.0	5.0

TABLE VIII. PILOT-BALLOON-MEASURED WIND DATA  
NIKE-HYDAC STV-93

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR			
	8		9	
	1055 MDT		1100 MDT	
	N-S	E-W	N-S	E-W
216- 300	3.0N	0.0	3.0N	2.0E
300- 400	3.0	3.0E	7.0	1.0
400- 600	4.0	2.0	4.0	2.5
600- 800	3.0	3.0	2.0	3.0
800-1000	1.0	3.5	2.0S	3.0
1000-1400	2.0	3.0	0.0	3.0
1400-2000	2.0	3.0	4.0S	4.0
2000-2500	LOST		6.0	6.5
2500-3000	BALLOON		14.0	5.5
3000-3500			20.0	4.0
3500-4000			22.0	5.0

TABLE VIII. PILOT-BALLOON-MEASURED WIND DATA (CONT)  
NIKE-HYDAC STV-93

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN KNOTS					
	0500 MDT		0800 MDT			
	N-S	E-W	N-S	E-W	N-S	E-W
4175-11000	0.0	8.0W	1.0S	5.0W		
11000-16000	0.0	16.0	0.0	15.0		
16000-21000	5.0S	27.5	4.5S	24.5		
21000-26000	0.0	25.0	10.5	29.0		
26000-32025	0.0	46.0	8.5	47.5		
32025-34000	0.0	60.0	10.0	56.0		
34000-36000	0.0	60.0	19.5	53.5		
36000-41000	0.0	62.0	10.5	59.0		
41000-46000	0.0	49.0	9.5	52.0		
46000-51000	0.0	39.0	7.5	42.5		
51000-56000	0.0	27.0	0.0	19.0		
56000-66000	6.0S	2.0E	3.5S	19.5		
66000-71089	1.0N	7.0				

TABLE IX. RAWINSONDE-MEASURED WIND DATA  
NIKE-HYDAC STV-94

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN KNOTS					
	0800 MDT		1100 MDT			
	N-S	E-W	N-S	E-W	N-S	E-W
4000-5000	10.5S	4.0E	12.0S	0.0		
5000-9000	4.0	3.0W	7.0	2.5E		
9000-15000	4.0N	10.5	9.0	7.5W		
15000-21000	3.5S	20.5	6.0	16.0		
21000-26000	10.5	29.0	15.0	26.0		
26000-31000	7.5	43.5	13.5	37.5		
31000-36000	10.0	57.0	19.5	53.5		
36000-41000	10.5	59.0	19.0	52.5		
41000-46000	9.0	52.0	9.5	54.0		
46000-51000	7.0	40.5	11.5	32.0		
51000-56000	4.0	21.5	4.0	22.5		
56000-61000	3.5	19.5	5.0	13.0		

TABLE X. RAWINSONDE-MEASURED WIND DATA  
NIKE-HYDAC STV-93

STATION ALTITUDE 3989.00 FEET MSL  
 7 MAY 70 0500 HRS MDT  
 ACQUISITION NO. 395

SIGNIFICANT LEVEL DATA  
 1250020395  
 WHITE SANDS

WSM SITE COORDINATES  
 488580.00 FEET E  
 185045.00 FEET N

TABLE XI

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
	AIR	DEWPOINT	
883.7 3989.0	8.5	-6.9	33.0
874.0 4293.3	17.5	-2.2	40.0
779.0 7492.2	13.2	-6.9	44.0
619.0 13600.6	-2.5	-15.3	57.0
609.0 14085.5	-2.3	-19.7	25.0
550.0 16710.6	-9.1	-24.8	27.0
540.0 17177.4	-9.0	-33.3	12.0
484.0 19922.5	-16.6	-39.4	12.0
458.0 21283.1	-18.1	-36.2	19.0
418.0 23506.8	-23.1	-37.8	25.0
410.0 23972.2	-23.3	-42.8	15.0
379.0 25846.2	-28.3	-38.1	39.0
368.0 26538.7	-30.2	-34.7	66.0
358.0 27182.1	-31.6	-35.6	69.0
334.0 28784.6	-32.6	-41.6	55.0
278.0 32893.9	-43.5	-48.8	71.0
272.0 33377.7	-48.6	-50.0	70.0
226.0 37343.4	-55.8		
197.0 40177.3	-62.7		
165.0 43727.4	-68.5		
153.0 45230.8	-65.3		
141.0 46871.0	-65.0		
112.0 51452.3	-69.2		
94.0 54915.2	-67.9		
86.0 56667.4	-70.7		
56.0 65225.4	-62.8		
49.0 67973.3	-58.0		
23.0 83984.8	-50.7		
17.0 90582.8	-45.1		
14.5 94103.9	-44.6		

STATION ALTITUDE 3959.00 FEET MSL  
5 MAY 70 0500 HRS MDT  
ASCENSION NO. 395

UPPER AIR DATA  
1250020395  
WHITE SANDS

WSTM SITE COORDINATES  
49d5d0.00 FEET E  
185045.00 FEET N

TABLE XII

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNUTS	KNUTS	DIRECTION DEGREES(TN)	SPEED KNUTS	
3989.0	883.7	8.5	-6.9	33.0	1091.5	654.0	130.0	130.0	1.9	1.000261
4000.0	883.3	8.8	-6.7	32.7	1089.8	654.4	130.2	130.2	2.0	1.000260
4500.0	867.5	17.2	-2.3	25.9	1038.6	664.2	140.9	140.9	3.9	1.000254
5000.0	852.1	16.6	-3.3	25.6	1022.6	663.5	151.5	151.5	5.9	1.000250
5500.0	836.9	15.9	-4.0	25.2	1006.8	662.7	162.2	162.2	7.8	1.000245
6000.0	822.0	15.2	-4.7	24.9	991.2	661.9	172.8	172.8	9.8	1.000240
6500.0	807.3	14.5	-5.5	24.6	975.9	661.1	183.5	183.5	11.7	1.000236
7000.0	792.9	13.9	-6.2	24.3	960.8	660.3	180.6	180.6	12.2	1.000232
7500.0	778.8	13.2	-7.0	24.0	946.0	659.5	177.5	177.5	12.5	1.000228
8000.0	764.4	11.9	-7.5	25.1	932.7	658.0	177.0	177.0	10.7	1.000224
8500.0	750.3	10.6	-8.0	26.1	919.6	656.5	178.8	178.8	8.6	1.000221
9000.0	736.4	9.4	-8.6	27.2	906.7	655.0	188.6	188.6	5.7	1.000217
9500.0	722.8	8.1	-9.2	28.2	894.1	653.5	216.7	216.7	3.6	1.000214
10000.0	709.5	6.8	-9.9	29.3	881.6	652.0	271.5	271.5	3.0	1.000210
10500.0	696.6	5.5	-10.6	30.3	869.3	650.5	304.3	304.3	3.9	1.000207
11000.0	683.5	4.3	-11.2	31.4	857.2	649.0	323.8	323.8	5.9	1.000204
11500.0	670.9	3.0	-12.0	32.4	845.3	647.5	326.1	326.1	7.1	1.000201
12000.0	658.5	1.7	-12.7	33.5	833.6	646.0	324.1	324.1	8.1	1.000197
12500.0	646.4	0.5	-13.4	34.6	822.1	644.5	318.4	318.4	8.7	1.000194
13000.0	634.4	-0.8	-14.2	35.6	810.7	643.0	312.2	312.2	9.1	1.000191
13500.0	622.7	-2.1	-15.0	36.7	799.5	641.4	306.0	306.0	9.2	1.000188
14000.0	611.0	-2.3	-18.7	27.4	785.4	641.1	300.2	300.2	9.4	1.000182
14500.0	599.3	-3.4	-20.5	25.3	773.4	639.8	295.2	295.2	9.9	1.000179
15000.0	587.8	-4.7	-21.5	25.7	762.2	638.2	289.8	289.8	10.6	1.000176
15500.0	576.5	-6.0	-22.4	26.1	751.2	636.7	282.9	282.9	12.0	1.000173
16000.0	565.4	-7.3	-23.4	26.5	740.4	635.1	276.8	276.8	13.4	1.000170
16500.0	554.5	-8.6	-24.3	26.8	729.8	633.6	273.5	273.5	14.9	1.000167
17000.0	543.8	-9.0	-29.3	17.7	717.1	632.9	270.3	270.3	16.4	1.000163
17500.0	533.1	-9.9	-34.0	12.0	705.4	631.8	267.6	267.6	17.1	1.000159
18000.0	522.6	-11.3	-35.1	12.0	695.1	630.2	264.8	264.8	17.8	1.000157

STATION ALTITUDE 3989.00 FEET MSL  
 5 MAY 70 0500 HRS MDT  
 ASCENSION NO. 395

UPPER AIR DATA  
 1250020395  
 WHITE SANDS

WSTN SITE COORDINATES  
 488580.00 FEET E  
 185045.00 FEET N

TABLE XII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
18500.0	512.3	-12.7	-36.3	12.0	685.0	628.5	260.8	17.7	1.000154
19000.0	502.1	-14.0	-37.4	12.0	675.1	626.8	250.5	17.8	1.000152
19500.0	492.2	-15.4	-38.5	12.0	665.3	625.1	250.5	19.0	1.000149
20000.0	482.5	-16.7	-39.2	12.4	655.4	623.6	246.1	20.4	1.000147
20500.0	472.8	-17.2	-37.8	15.0	643.6	623.0	246.8	22.4	1.000145
21000.0	463.3	-17.8	-36.7	17.5	632.0	622.3	248.6	24.5	1.000142
21500.0	453.9	-18.6	-36.3	19.6	621.2	621.3	251.4	26.5	1.000140
22000.0	444.7	-19.7	-36.6	20.9	611.2	618.9	254.7	28.6	1.000138
22500.0	435.7	-20.8	-36.9	22.3	601.5	618.6	257.6	30.3	1.000135
23000.0	426.8	-22.0	-37.3	23.0	591.9	617.2	258.0	29.8	1.000133
23500.0	418.1	-23.1	-37.8	25.0	582.4	615.8	259.1	28.0	1.000131
24000.0	409.5	-23.4	-42.7	15.4	571.2	613.4	260.9	27.9	1.000128
24500.0	401.0	-24.7	-40.5	21.8	562.3	613.8	262.3	26.5	1.000126
25000.0	392.7	-26.0	-39.2	28.2	553.6	612.1	263.7	24.9	1.000125
25500.0	384.5	-27.4	-38.4	34.0	545.0	610.5	265.6	24.6	1.000123
26000.0	376.5	-28.7	-37.1	45.0	536.6	608.8	267.3	24.3	1.000121
26500.0	368.6	-30.1	-34.8	64.5	528.2	607.2	268.1	23.8	1.000120
27000.0	360.8	-31.2	-35.3	68.2	519.4	605.8	269.0	23.4	1.000118
27500.0	353.1	-32.4	-36.7	66.2	510.9	604.3	270.1	23.8	1.000115
28000.0	345.5	-33.6	-38.6	61.9	502.5	602.7	269.9	23.2	1.000113
28500.0	338.1	-34.9	-40.5	57.5	494.4	601.1	268.5	23.6	1.000111
29000.0	330.8	-36.1	-41.9	55.8	486.2	599.5	266.6	25.4	1.000109
29500.0	323.5	-37.3	-42.8	57.8	477.9	598.0	264.5	27.7	1.000107
30000.0	316.4	-38.5	-43.6	59.7	469.7	596.5	263.3	29.5	1.000106
30500.0	309.4	-39.7	-44.5	61.7	461.8	594.9	262.6	31.6	1.000104
31000.0	302.6	-40.9	-45.3	63.6	453.9	593.4	262.3	34.2	1.000102
31500.0	295.9	-42.1	-46.2	65.6	446.2	591.9	261.5	35.9	1.000100
32000.0	289.4	-43.3	-47.1	67.5	438.7	590.3	260.6	37.3	1.000098
32500.0	283.0	-44.5	-48.0	69.4	431.3	588.8	260.7	40.0	1.000097
33000.0	276.7	-45.7	-49.0	70.8	423.9	587.2	260.9	42.5	1.000095

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0500 HRS MDT  
ASCENSION NO. 395

UPPER AIR DATA  
1250020395  
WISITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XIX (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED UP		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	270.5	-46.9	-50.5	67.8**	416.4	585.7		261.6	44.1	1.0000093
34000.0	264.2	-48.0	-52.8	59.0**	408.9	584.2		262.8	46.0	1.0000091
34500.0	258.1	-49.2	-55.3	50.2**	401.5	582.7		264.8	48.4	1.0000090
35000.0	252.1	-50.4	-57.9	41.4**	394.3	581.2		266.2	50.7	1.0000088
35500.0	246.3	-51.5	-60.8	32.5**	387.2	579.7		267.2	52.9	1.0000086
36000.0	240.6	-52.7	-64.2	23.7**	380.3	578.2		267.5	54.6	1.0000085
36500.0	235.1	-53.8	-68.6	14.9**	373.5	576.6		267.7	56.2	1.0000083
37000.0	229.7	-55.0	-75.6	6.1**	366.8	575.1		267.5	58.7	1.0000082
37500.0	224.3	-56.2			360.2	573.5		267.2	57.3	1.0000080
38000.0	218.9	-57.4			353.5	571.9		266.8	57.7	1.0000079
38500.0	213.7	-58.6			347.0	570.3		266.4	58.5	1.0000077
39000.0	208.6	-59.8			340.7	568.7		265.8	60.6	1.0000076
39500.0	203.6	-61.1			334.4	567.1		265.0	62.8	1.0000074
40000.0	198.7	-62.3			328.3	565.4		263.9	65.1	1.0000073
40500.0	193.9	-63.2			321.7	564.2		263.8	64.8	1.0000072
41000.0	189.1	-64.0			315.0	563.1		264.0	63.3	1.0000070
41500.0	184.4	-64.9			308.5	562.0		263.5	62.0	1.0000069
42000.0	179.9	-65.7			302.0	560.9		267.0	60.5	1.0000067
42500.0	175.4	-66.5			295.8	559.8		268.6	57.2	1.0000066
43000.0	171.1	-67.3			289.6	558.6		269.3	54.9	1.0000064
43500.0	166.9	-68.1			283.6	557.5		267.6	55.9	1.0000063
44000.0	162.8	-67.9			276.3	557.8		265.8	56.8	1.0000062
44500.0	158.7	-66.9			268.1	559.3		263.5	57.3	1.0000060
45000.0	154.8	-65.8			260.1	560.7		261.4	57.7	1.0000058
45500.0	151.0	-65.3			253.0	561.4		260.2	57.0	1.0000056
46000.0	147.3	-65.2			246.7	561.6		259.4	56.3	1.0000055
46500.0	143.6	-65.1			240.5	561.7		261.3	54.4	1.0000054
47000.0	140.1	-65.1			234.6	561.6		263.2	52.3	1.0000052
47500.0	136.6	-65.6			229.3	561.0		265.3	48.1	1.0000051
48000.0	133.2	-66.0			224.1	560.4		267.4	43.9	1.0000050

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.



STATION ALTITUDE 3989.00 FEET MSL

5 MAY 70

ASCENSION NO. 395

UPPER AIR DATA

1250020395

WHITE SANDS

WSTM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

TABLE XII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			SOUND KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS		
48500.0	129.9	-66.5			219.0	559.8		269.3		1.000049
49000.0	126.7	-67.0			214.1	559.1		271.2		1.000048
49500.0	123.5	-67.4			209.2	558.5		270.5		1.000047
50000.0	120.5	-67.9			204.5	557.9		269.8		1.000046
50500.0	117.5	-68.3			199.9	557.3		268.7		1.000045
51000.0	114.6	-68.8			195.3	556.6		267.6		1.000043
51500.0	111.7	-69.2			190.9	556.1		266.3		1.000042
52000.0	108.9	-69.0			185.9	556.4		265.0		1.000041
52500.0	106.2	-68.8			181.1	556.6		264.3		1.000040
53000.0	103.6	-68.6			176.4	556.9		263.6		1.000039
53500.0	101.0	-68.4			171.9	557.1		263.6		1.000038
54000.0	98.5	-68.2			167.4	557.4		263.9		1.000037
54500.0	96.0	-68.1			163.1	557.6		266.9		1.000036
55000.0	93.6	-68.0			159.0	557.7		269.8		1.000035
55500.0	91.3	-68.8			155.6	556.6		271.9		1.000035
56000.0	89.0	-69.6			152.3	555.3		274.4		1.000034
56500.0	86.7	-70.4			149.1	554.4		279.2		1.000033
57000.0	84.6	-70.4			145.3	554.4		283.8		1.000032
57500.0	82.5	-69.9			141.4	555.1		283.0		1.000031
58000.0	80.4	-69.5			137.6	555.7		282.3		1.000031
58500.0	78.5	-69.0			133.9	556.3		282.5		1.000030
59000.0	76.5	-68.5			130.3	557.0		282.9		1.000029
59500.0	74.6	-68.1			126.8	557.6		275.3		1.000028
60000.0	72.8	-67.6			123.4	558.2		266.4		1.000027
60500.0	71.0	-67.2			120.0	558.8		255.8		1.000027
61000.0	69.2	-66.7			116.8	559.5		244.7		1.000026
61500.0	67.5	-66.2			113.7	560.1		233.1		1.000025
62000.0	65.8	-65.8			110.6	560.7		221.3		1.000025
62500.0	64.2	-65.3			107.6	561.3		214.8		1.000024
63000.0	62.6	-64.9			104.7	562.0		211.0		1.000023

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0500 HRS MDT  
ASCENSION NO. 395

UPPER AIR DATA  
1250020395  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
63500.0	61.1	-64.4			101.9	562.6	224.9	3.9	1.0000025
64000.0	59.5	-63.9			99.2	563.2	250.8	1.9	1.0000022
64500.0	58.1	-63.5			96.5	563.8	298.5	1.7	1.0000021
65000.0	56.6	-63.0			93.9	564.5	9.4	3.4	1.0000021
65500.0	55.3	-62.3			91.3	565.4	60.7	4.1	1.0000020
66000.0	53.9	-61.4			88.8	566.5	73.4	3.0	1.0000020
66500.0	52.6	-60.6			86.3	567.7	84.1	2.1	1.0000019
67000.0	51.4	-59.7			83.9	568.9	84.2	3.2	1.0000019
67500.0	50.1	-58.8			81.5	570.0	84.2	4.3	1.0000018
68000.0	48.9	-58.0			79.2	571.2	121.7	3.4	1.0000018
68500.0	47.8	-57.8			77.3	571.5	160.8	2.4	1.0000017
69000.0	46.7	-57.5			75.4	571.8	149.7	2.4	1.0000017
69500.0	45.6	-57.3			73.6	572.1	120.2	2.9	1.0000016
70000.0	44.5	-57.1			71.8	572.4	104.9	3.5	1.0000016
70500.0	43.5	-56.8			70.0	572.7	107.0	4.3	1.0000015
71000.0	42.5	-56.6			68.3	573.0	108.7	5.1	1.0000015
71500.0	41.5	-56.4			66.7	573.3	106.9	5.5	1.0000015
72000.0	40.5	-56.2			65.1	573.6	105.0	5.9	1.0000014
72500.0	39.6	-55.9			63.5	573.9	101.2	5.8	1.0000014
73000.0	38.6	-55.7			61.9	574.2	96.9	5.7	1.0000014
73500.0	37.7	-55.5			60.4	574.5	83.9	5.1	1.0000013
74000.0	36.9	-55.3			58.9	574.8	61.6	4.0	1.0000013
74500.0	36.0	-55.0			57.5	575.1	43.3	3.4	1.0000013
75000.0	35.2	-54.8			56.1	575.4	44.2	4.9	1.0000012
75500.0	34.3	-54.6			54.7	575.7	45.0	6.4	1.0000012
76000.0	33.5	-54.3			53.4	576.0	48.3	7.2	1.0000012
76500.0	32.8	-54.1			52.1	576.3	52.1	7.9	1.0000012
77000.0	32.0	-53.9			50.8	576.6	60.6	8.3	1.0000011
77500.0	31.2	-53.7			49.6	576.9	73.5	8.5	1.0000011
78000.0	30.5	-53.4			48.4	577.2	85.0	8.7	1.0000011

STATION ALTITUDE 3989.00 FEET MSL  
 5 MAY 70 0500 HRS GMT  
 ASCENSION NO. 395

UPPER AIR DATA  
 1250020395  
 WHITE SANDS

WSTM SITE COORDINATES  
 480580.00 FEET E  
 185045.00 FEET N

TABLE XII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
78500.0	29.8	-53.2			47.2	577.5	89.7	8.9	1.000011
79000.0	29.1	-53.0			46.1	577.8	94.4	9.0	1.000010
79500.0	28.4	-52.7			44.9	578.1	99.4	8.5	1.000010
80000.0	27.8	-52.5			43.8	578.4	104.6	6.9	1.000010
80500.0	27.1	-52.3			42.8	578.7	109.8	5.3	1.000010
81000.0	26.5	-52.1			41.7	579.0	112.0	4.2	1.000009
81500.0	25.9	-51.8			40.7	579.3	107.3	4.1	1.000009
82000.0	25.3	-51.6			39.7	579.6	102.7	4.1	1.000009
82500.0	24.7	-51.4			38.8	579.9	98.0	3.8	1.000009
83000.0	24.1	-51.1			37.8	580.2	93.3	2.7	1.000008
83500.0	23.5	-50.9			36.9	580.5	88.5	1.7	1.000008
84000.0	23.0	-50.7			36.0	580.8	84.1	0.8	1.000008
84500.0	22.5	-50.3			35.1	581.3	84.1	2.3	1.000008
85000.0	22.0	-49.8			34.3	581.9	84.1	3.8	1.000008
85500.0	21.5	-49.4			33.4	582.4	84.1	5.3	1.000007
86000.0	21.0	-49.0			32.6	583.0	86.3	6.0	1.000007
86500.0	20.5	-48.6			31.8	583.5	88.8	6.5	1.000007
87000.0	20.0	-48.1			31.0	584.1	91.3	7.1	1.000007
87500.0	19.6	-47.7			30.3	584.6	93.1	7.6	1.000007
88000.0	19.1	-47.3			29.5	585.2	94.6	8.2	1.000007
88500.0	18.7	-46.9			28.8	585.7	96.2	8.7	1.000006
89000.0	18.3	-46.4			28.1	586.3	96.7	9.2	1.000006
89500.0	17.9	-46.0			27.4	586.8	96.1	9.7	1.000006
90000.0	17.5	-45.6			26.7	587.4	95.5	10.1	1.000006
90500.0	17.1	-45.2			26.1	587.9			1.000006
91000.0	16.7	-45.0			25.5	588.1			1.000006
91500.0	16.3	-45.0			24.9	588.2			1.000006
92000.0	15.9	-44.9			24.3	588.3			1.000005
92500.0	15.6	-44.8			23.8	588.4			1.000005
93000.0	15.2	-44.8			23.3	588.5			1.000005

STATION ALTITUDE 3989.00 FEET MSL	UPPER AIR DATA	WSTM SITE COORDINATES
3 MAY 70	1250020395	48380.00 FEET E
ASCENSION ND. 395	WH (FL SANDS)	185045.00 FEET N

  

TABLE XII (Cont)									
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED UP KNUTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNUTS	INDEX OF REFRACTION
		AIR	DEWPOINT						
91500.0	14.9	-44.7			22.7	588.5			1.000000
94000.0	14.6	-44.6			22.2	588.6			1.000000

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0500 HRS MDT  
ASCENSION NO. 395

MANDATORY LEVELS  
1250020395  
WHITE SANDS

WSTM SITE COORDINATES  
482580400 FEET E  
185045.00 FEET N

TABLE XIII

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA		
				DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	5070.	16.5	26.	153.1	6.2	
800.0	6754.	14.2	24.	182.2	12.0	
750.0	8530.	10.6	26.	179.4	8.4	
700.0	10399.	5.9	30.	300.6	3.6	
650.0	12371.	0.8	34.	320.0	8.5	
600.0	14462.	-3.3	25.	295.5	9.8	
550.0	16696.	-9.1	27.	272.1	15.6	
500.0	19096.	-14.3	12.	255.1	18.1	
450.0	21690.	-19.1	20.	252.7	27.4	
400.0	24533.	-24.9	23.	262.5	26.3	
350.0	27657.	-32.9	64.	270.6	23.0	
300.0	31162.	-41.4	64.	262.1	35.0	
250.0	35139.	-50.8	38.**	266.6	51.6	
200.0	39788.	-61.9		264.2	64.4	
175.0	42467.	-66.6		268.8	56.8	
150.0	45522.	-65.2		260.0	56.9	
125.0	49156.	-67.2		270.8	41.4	
100.0	53545.	-68.4		263.6	39.8	
80.0	57918.	-69.4		282.2	16.6	
70.0	60549.	-66.9		250.8	8.4	
60.0	63625.	-64.1		241.4	2.6	
50.0	67328.	-58.7		86.2	4.3	
40.0	71960.	-56.0		103.7	5.9	
30.0	78001.	-53.3		87.8	8.8	
25.0	81869.	-51.5		100.9	4.0	
20.0	86653.	-48.1		91.3	7.1	
15.0	92937.	-44.7				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0800 HRS MDT  
ASCENSION NO. 396

SIGNIFICANT LEVEL DATA  
12500020396  
WHITE SANDS

WSTM SITE COORDINATES  
488560.00 FEET E  
185045.00 FEET N

TABLE XIV

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
885.1	3989.0	15.5	-6.1	22.0
864.0	4659.5	15.1	-3.8	27.0
844.0	5311.8	16.5	-1.6	29.0
807.0	6558.1	14.0	-3.8	29.0
781.0	7464.6	14.0	-3.8	29.0
710.0	10074.6	7.9	-8.2	31.0
582.0	15325.1	-6.0	-16.9	42.0
553.0	16634.8	-8.5	-18.9	43.0
548.0	16866.0	-9.4	-22.1	35.0
544.0	17052.4	-8.6	-26.1	23.0
534.0	17524.8	-9.1	-30.4	16.0
449.0	21855.0	-18.6	-32.3	29.0
424.0	23249.8	-22.4	-32.2	41.0
420.0	23478.9	-22.5	-30.0	51.0
356.0	27404.9	-31.0	-39.0	46.0
322.0	29717.0	-37.4	-44.9	46.0
298.0	31467.9	-40.0	-47.4	46.0
286.0	32387.2	-42.4	-49.8	45.0
218.0	38238.6	-56.9		
190.0	41065.7	-61.1		
176.0	42615.8	-63.5		
159.0	44648.7	-68.1		
128.0	48979.6	-64.5		
125.0	49458.9	-63.3		
116.0	50964.0	-65.9		
104.0	53160.7	-63.9		
92.0	55609.8	-68.9		
81.0	58126.4	-68.4		
79.0	58626.5	-64.1		
62.0	63528.0	-63.7		

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0800 HRS MDT  
ASCENSION NO. 396

SIGNIFICANT LEVEL DATA  
1250020396  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XIV (Cont)

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	DEWPOINT DEGREES	REL. HUM. PERCENT
MILLIBARS	MSL FEET		CENTIGRADE	
60.0	64196.2		-61.2	

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0800 HRS MDT  
ASCENSION NU. 396

UPPER AIR DATA  
1200020396  
WHLIFE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XV

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
3989.0	885.1	15.5	-6.1	22.0	1066.6	662.1	0.	0.	1.000255
4000.0	884.7	15.5	-6.1	22.1	1066.2	662.1	0.8	0.0	1.000255
4500.0	869.0	15.2	-4.3	25.8	1048.0	661.8	35.4	2.3	1.000254
5000.0	853.5	15.8	-2.8	28.0	1026.7	662.7	70.0	4.5	1.000252
5500.0	838.3	16.1	-1.9	29.0	1007.3	663.0	104.6	6.7	1.000248
6000.0	823.4	15.1	-2.8	29.0	992.9	661.9	139.2	8.9	1.000244
6500.0	808.7	14.1	-3.7	29.0	978.7	660.7	168.9	11.0	1.000239
7000.0	794.2	14.0	-3.8	29.0	961.6	660.5	165.0	12.3	1.000236
7500.0	780.0	13.9	-3.8	29.0	944.6	660.5	163.4	13.2	1.000232
8000.0	765.9	12.7	-4.7	29.4	931.4	659.1	164.4	12.5	1.000228
8500.0	752.0	11.6	-5.5	29.6	918.4	657.7	166.3	10.9	1.000224
9000.0	738.4	10.4	-6.4	30.2	905.5	656.3	169.5	8.0	1.000220
9500.0	725.1	9.2	-7.2	30.6	892.9	654.9	177.5	5.9	1.000216
10000.0	711.9	8.1	-8.1	30.9	880.5	653.6	190.7	4.7	1.000212
10500.0	698.7	6.8	-8.8	31.9	868.1	652.0	210.2	3.5	1.000209
11000.0	685.6	5.5	-9.6	32.9	856.0	650.5	236.3	2.5	1.000205
11500.0	672.7	4.1	-10.4	34.0	844.0	648.9	264.6	2.3	1.000202
12000.0	660.1	2.8	-11.2	35.0	832.2	647.3	294.4	2.7	1.000198
12500.0	647.7	1.5	-12.0	36.1	820.6	645.7	310.8	3.5	1.000194
13000.0	635.6	0.2	-12.8	37.1	809.1	644.2	322.0	4.3	1.000192
13500.0	623.6	-1.2	-13.7	38.2	797.9	642.6	315.1	4.8	1.000189
14000.0	611.9	-2.5	-14.5	39.2	786.8	641.0	305.2	5.3	1.000186
14500.0	600.5	-3.8	-15.4	40.3	775.9	639.4	284.2	6.6	1.000183
15000.0	589.2	-5.1	-16.3	41.3	765.1	637.8	266.4	7.9	1.000179
15500.0	578.0	-6.3	-17.2	42.1	754.0	636.4	261.7	10.9	1.000174
16000.0	566.9	-7.3	-17.9	42.5	742.2	635.2	258.2	14.0	1.000173
16500.0	555.9	-8.2	-18.7	42.9	730.5	634.1	259.4	15.9	1.000170
17000.0	545.1	-8.8	-24.8	26.4	718.1	633.2	261.7	17.3	1.000164
17500.0	534.5	-9.1	-30.1	16.4	705.0	632.9	265.3	17.5	1.000160
18000.0	523.9	-10.1	-30.4	17.4	693.8	631.6	270.0	16.8	1.000157



STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0800 HRS MDT  
ASCENSION NO. 396

UPPER AIR DATA  
1250020396  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XV (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
18500.0	513.6	-11.2	-30.4	18.9	682.9	630.3		272.3	15.4	1.000155
19000.0	503.4	-12.3	-30.6	20.4	672.2	628.9		272.7	13.2	1.000152
19500.0	493.4	-13.4	-30.7	21.9	661.7	627.0		267.9	12.3	1.000150
20000.0	483.6	-14.5	-31.0	23.4	651.3	626.3		260.2	12.1	1.000148
20500.0	474.0	-15.6	-31.3	24.9	641.1	625.0		256.8	13.4	1.000145
21000.0	464.6	-16.7	-31.6	26.4	631.1	623.6		255.2	15.5	1.000143
21500.0	455.4	-17.8	-32.0	27.9	621.3	622.3		256.6	18.0	1.000141
22000.0	446.3	-19.0	-32.3	30.2	611.7	620.9		259.4	20.7	1.000139
22500.0	437.3	-20.4	-32.1	34.5	602.4	619.2		261.3	23.0	1.000137
23000.0	428.4	-21.7	-32.1	38.9	593.4	617.5		262.8	25.1	1.000135
23500.0	419.6	-22.5	-30.0	51.0	583.1	616.5		261.5	26.4	1.000133
24000.0	410.9	-23.6	-31.2	50.3	573.5	615.2		259.3	27.5	1.000130
24500.0	402.3	-24.7	-32.3	49.7	564.0	613.9		255.3	28.7	1.000128
25000.0	393.9	-25.8	-33.5	49.1	554.7	612.5		251.1	29.9	1.000126
25500.0	385.7	-26.9	-34.6	48.4	545.5	611.2		249.9	31.1	1.000124
26000.0	377.7	-28.0	-35.8	47.8	536.5	609.8		248.7	32.3	1.000121
26500.0	369.8	-29.0	-36.9	47.2	527.7	608.4		249.3	32.9	1.000119
27000.0	362.1	-30.1	-38.1	46.5	519.0	607.1		250.1	33.5	1.000117
27500.0	354.5	-31.3	-39.2	46.0	510.6	605.7		252.4	33.4	1.000115
28000.0	346.9	-32.6	-40.5	46.0	502.5	603.9		255.0	33.1	1.000113
28500.0	339.5	-34.0	-41.8	46.0	494.6	602.2		256.8	33.5	1.000111
29000.0	332.2	-35.4	-43.1	46.0	486.8	600.4		258.4	33.9	1.000109
29500.0	325.0	-36.8	-44.4	46.0	479.1	598.7		258.3	34.4	1.000107
30000.0	318.0	-37.8	-45.3	46.0	470.7	597.4		258.2	35.0	1.000106
30500.0	311.0	-38.6	-46.0	46.0	461.9	596.4		258.2	36.4	1.000104
31000.0	304.2	-39.3	-46.7	46.0	453.2	595.5		258.2	37.8	1.000102
31500.0	297.6	-40.1	-47.4	46.0	444.8	594.5		258.2	39.1	1.000100
32000.0	291.0	-41.4	-48.8	45.4	437.4	592.8		258.3	40.4	1.000098
32500.0	284.5	-42.7	-50.2	44.1**	430.1	591.1		258.9	42.1	1.000096
33000.0	278.0	-43.9	-52.1	40.3**	422.5	589.6		259.4	43.8	1.000094

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0800 HRS MDT  
ASCENSION NO. 396

UPPER AIR DATA  
1200Z0396  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XV (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	271.6	-45.2	-54.1	36.4**	415.0	588.0	259.3	259.3	46.0	1.000092
34000.0	265.4	-46.4	-56.2	32.6**	407.7	586.4	259.3	259.3	48.1	1.000091
34500.0	259.3	-47.6	-58.3	28.8**	400.6	584.7	258.9	258.9	49.9	1.000089
35000.0	253.3	-48.9	-60.5	24.9**	393.6	583.1	258.5	258.5	51.7	1.000088
35500.0	247.5	-50.1	-62.9	21.1**	386.7	581.5	258.0	258.0	53.4	1.000086
36000.0	241.9	-51.4	-65.4	17.2**	379.9	579.9	257.6	257.6	55.0	1.000083
36500.0	236.3	-52.6	-68.3	13.4**	373.3	578.3	257.0	257.0	56.4	1.000083
37000.0	230.9	-53.8	-71.0	9.5**	366.8	576.6	256.3	256.3	57.5	1.000082
37500.0	225.6	-55.1	-76.0	5.7**	360.4	575.0	255.6	255.6	58.5	1.000080
38000.0	220.4	-56.3	-83.8	1.8**	354.2	573.4	254.8	254.8	59.1	1.000079
38500.0	215.2	-57.5			347.7	571.8	253.9	253.9	59.7	1.000077
39000.0	210.1	-58.6			341.1	570.4	253.6	253.6	60.4	1.000076
39500.0	205.0	-59.7			334.6	568.9	253.2	253.2	61.2	1.000075
40000.0	200.1	-60.8			328.3	567.5	254.5	254.5	61.3	1.000073
40500.0	195.3	-61.9			322.0	566.0	256.3	256.3	61.3	1.000072
41000.0	190.6	-63.0			315.9	564.5	258.6	258.6	61.2	1.000070
41500.0	186.0	-63.2			308.6	564.2	261.3	261.3	61.1	1.000069
42000.0	181.4	-63.3			301.3	564.0	263.7	263.7	60.5	1.000067
42500.0	177.0	-63.5			294.1	563.8	265.5	265.5	57.9	1.000066
43000.0	172.7	-64.4			288.1	562.6	267.2	267.2	55.4	1.000064
43500.0	168.4	-65.5			282.5	561.1	266.6	266.6	54.7	1.000063
44000.0	164.2	-66.6			277.1	559.6	265.6	265.6	54.3	1.000062
44500.0	160.2	-67.8			271.7	558.0	264.3	264.3	57.0	1.000061
45000.0	156.2	-67.8			265.1	558.0	262.8	262.8	62.4	1.000059
45500.0	152.4	-67.4			258.0	558.5	261.6	261.6	66.3	1.000057
46000.0	148.6	-67.0			251.1	559.1	261.5	261.5	63.6	1.000056
46500.0	144.9	-66.6			244.6	559.7	261.4	261.4	61.0	1.000054
47000.0	141.3	-66.1			237.9	560.2	262.1	262.1	59.3	1.000053
47500.0	137.8	-65.7			231.5	560.8	262.7	262.7	57.8	1.000052
48000.0	134.4	-65.3			225.4	561.3	263.4	263.4	52.0	1.000050

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70  
ASCENSION NO. 396

UPPER AIR DATA  
1250020396  
WHITE SANDS

WSM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XV (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
48500.0	131.1	-64.9			219.4	561.8	264.0	44.3	1.000049
49000.0	127.9	-64.4			213.5	562.5	263.6	41.9	1.000048
49500.0	124.7	-63.4			207.2	564.0	261.9	45.3	1.000046
50000.0	121.7	-64.2			202.9	562.8	260.6	47.6	1.000045
50500.0	118.7	-65.1			198.8	561.6	260.4	46.4	1.000044
51000.0	115.8	-65.9			194.6	560.6	260.3	45.2	1.000043
51500.0	113.0	-65.4			189.4	561.2	260.5	44.0	1.000042
52000.0	110.2	-65.0			184.4	561.8	260.7	42.8	1.000041
52500.0	107.5	-64.5			179.5	562.4	263.1	38.8	1.000040
53000.0	104.8	-64.0			174.7	563.1	266.5	33.8	1.000039
53500.0	102.2	-64.6			170.8	562.3	268.7	30.4	1.000038
54000.0	99.7	-65.6			167.4	560.9	269.5	28.9	1.000037
54500.0	97.3	-66.6			164.1	559.6	270.8	27.1	1.000037
55000.0	94.9	-67.7			160.8	558.2	273.8	24.3	1.000036
55500.0	92.5	-68.7			157.6	556.8	276.7	21.6	1.000035
56000.0	90.2	-68.8			153.8	556.0	274.0	23.1	1.000034
56500.0	87.9	-68.7			149.9	556.7	271.2	24.7	1.000033
57000.0	85.8	-68.6			146.1	556.9	268.9	23.6	1.000033
57500.0	83.6	-68.5			142.4	557.0	266.9	21.4	1.000032
58000.0	81.5	-68.4			138.7	557.1	265.8	19.1	1.000031
58500.0	79.5	-65.2			133.2	561.5	265.8	16.6	1.000030
59000.0	77.6	-64.1			129.2	563.0	265.2	14.4	1.000029
59500.0	75.7	-64.0			126.1	563.1	259.9	14.9	1.000028
60000.0	73.8	-64.0			123.0	563.1	254.6	15.5	1.000027
60500.0	72.0	-63.9			119.9	563.2	252.3	15.9	1.000027
61000.0	70.3	-63.9			117.0	563.2	253.5	16.0	1.000026
61500.0	68.5	-63.9			114.1	563.3	254.7	16.2	1.000025
62000.0	66.9	-63.8			111.3	563.4			1.000025
62500.0	65.2	-63.8			108.6	563.4			1.000024
63000.0	63.6	-63.7			105.9	563.5			1.000024

STATION ALTITUDE 3989.00 FEET MSL	UPPER AIR DATA	WSM SITE COORDINATES
5 MAY 70	1200Z0396	488580.00 FEET E
ASCENSION NO. 396	WHALE SANDS	185045.00 FEET N

  

TABLE XV (Cont)						
GEOMETRIC ALTITUDE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
MSL FEET	AIR TEMPERATURE DEGREES CENTIGRADE					
500.0	62.1	-63.7	103.3	563.5		1.000023
64000.0	60.6	-61.9	99.9	565.9		1.000022

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 0600Z HRS NDT  
ASCENSION NO. 396

MANDATORY LEVELS  
1250020396  
WHITE SANDS

WSTA SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVI

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA		
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TNA)	SPEED KNOTS	
850.0	5113.	16.1	-2.2	28.	77.9	5.0	
800.0	6796.	14.0	-3.8	29.	166.9	11.8	
750.0	8576.	11.4	-5.6	30.	166.8	10.4	
700.0	10451.	6.9	-8.8	32.	207.9	3.6	
650.0	12431.	1.7	-11.8	36.	309.4	3.4	
600.0	14526.	-3.9	-15.5	40.	284.7	6.6	
550.0	16758.	-9.0	-20.8	38.	260.6	16.7	
500.0	19166.	-12.7	-30.6	21.	272.8	12.4	
450.0	21775.	-18.5	-32.3	29.	258.3	19.6	
400.0	24619.	-25.0	-32.7	50.	254.1	29.1	
350.0	27760.	-32.1	-40.0	46.	253.9	33.2	
300.0	31266.	-39.8	-47.2	46.	258.2	38.6	
250.0	35269.	-49.6	-61.8	23.**	258.2	52.9	
200.0	39939.	-60.8			254.6	61.3	
175.0	42638.	-63.8			266.2	56.8	
150.0	45698.	-67.1			261.6	64.7	
125.0	49335.	-63.3			262.1	44.9	
100.0	53804.	-65.5			269.4	29.0	
80.0	58202.	-66.3			265.8	17.3	
70.0	60885.	-63.9			253.6	16.0	
60.0	63990.	-61.2					

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1100 HRS NDT  
ASCENSION NO. 397

SIGNIFICANT LEVEL DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVII

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM.
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
885.3	3989.0	23.0	-3.4	17.0
872.0	4419.1	20.4	-4.0	19.0
817.0	6247.8	16.0	-7.0	20.0
801.0	6799.3	16.5	-7.2	19.0
629.0	13353.8	0.2	-16.2	28.0
585.0	15245.3	-5.1	-15.8	43.0
542.0	17199.3	-10.0	-21.4	39.0
524.0	18053.9	-11.0	-31.4	17.0
496.0	19438.0	-12.0	-32.8	16.0
413.0	23939.3	-24.0	-33.7	41.0
396.0	24947.1	-24.8	-32.2	51.0
376.0	26180.7	-27.6	-35.8	46.0
288.0	32320.4	-40.9	-50.1	37.0
197.0	40464.7	-60.6		
183.0	41976.0	-60.8		
151.0	45881.9	-64.4		
143.0	46985.4	-62.0		
109.0	52452.8	-67.2		
76.0	59641.9	-66.4		
60.0	64425.2	-61.3		
57.0	65474.5	-62.0		
34.0	76302.8	-51.0		
29.0	79712.1	-52.6		
25.0	82923.1	-47.0		
21.0	86743.6	-47.0		
11.0	101105.9	-41.0		

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1160 HRS  
ASCENSION NO. 397

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
48580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
3989.0	885.3	23.0	-3.4	17.0	1039.4	670.8	0.	0.	0.	1.000252
4000.0	885.0	22.9	-3.4	17.1	1039.3	670.7	0.9	0.9	0.0	1.000252
4200.0	878.7	21.7	-3.6	18.0	1036.2	669.3	17.8	17.8	0.8	1.000251
4400.0	872.6	20.5	-4.0	18.9	1033.2	667.9	34.7	34.7	1.5	1.000250
4600.0	866.4	20.0	-4.3	19.1	1027.9	667.3	51.6	51.6	2.2	1.000249
4800.0	860.2	19.5	-4.6	19.2	1022.3	666.7	68.5	68.5	2.9	1.000247
5000.0	854.1	19.0	-4.9	19.3	1016.7	666.2	85.5	85.5	3.7	1.000245
5200.0	848.1	18.5	-5.3	19.4	1011.2	665.6	98.3	98.3	4.5	1.000244
5400.0	842.1	18.0	-5.6	19.5	1005.7	665.0	107.2	107.2	5.5	1.000242
5600.0	836.1	17.6	-5.9	19.6	1000.3	664.5	116.7	116.7	6.4	1.000241
5800.0	830.1	17.1	-6.2	19.8	994.8	663.9	127.5	127.5	7.1	1.000239
6000.0	824.2	16.6	-6.6	19.9	989.4	663.4	138.3	138.3	7.7	1.000237
6200.0	818.4	16.1	-6.9	20.0	984.1	662.8	146.4	146.4	9.0	1.000236
6400.0	812.6	16.1	-7.0	19.7	977.0	662.8	154.1	154.1	10.3	1.000234
6600.0	806.7	16.3	-7.1	19.4	969.4	663.0	161.1	161.1	11.7	1.000232
6800.0	801.0	16.5	-7.2	19.0	961.9	663.2	165.1	165.1	13.4	1.000230
7000.0	795.1	16.0	-7.4	19.3	956.5	662.7	169.2	169.2	15.0	1.000229
7200.0	789.2	15.5	-7.7	19.6	951.1	662.1	171.3	171.3	16.1	1.000228
7400.0	783.4	15.0	-7.9	19.8	945.7	661.5	170.7	170.7	16.4	1.000226
7600.0	777.7	14.5	-8.1	20.1	940.4	660.9	170.1	170.1	16.7	1.000225
7800.0	772.0	14.0	-8.4	20.4	935.2	660.4	170.2	170.2	16.4	1.000223
8000.0	766.3	13.5	-8.6	20.6	929.9	659.8	170.7	170.7	15.9	1.000222
8200.0	760.7	13.0	-8.9	20.9	924.7	659.2	171.1	171.1	15.4	1.000220
8400.0	755.1	12.5	-9.1	21.2	919.5	658.6	170.7	170.7	14.2	1.000219
8600.0	749.5	12.0	-9.4	21.5	914.4	658.0	170.2	170.2	13.0	1.000218
8800.0	744.0	11.5	-9.6	21.7	909.3	657.5	170.4	170.4	12.3	1.000216
9000.0	738.6	11.0	-9.9	22.0	904.2	656.9	171.0	171.0	12.1	1.000215
9200.0	733.1	10.5	-10.2	22.3	899.1	656.3	171.7	171.7	11.8	1.000214
9400.0	727.7	10.0	-10.4	22.6	894.1	655.7	170.2	170.2	10.9	1.000212
9600.0	722.4	9.5	-10.7	22.8	889.1	655.1	168.8	168.8	10.0	1.000211

STATION ALTITUDE 3589.00 FEET MSL  
5 MAY 70 1100. HRS MDT  
ASCENSION NO. 357 11

WSTM SITE COORDINATES  
488280.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			SOUND KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS		
9800.0	717.1	9.0	-11.0	23.1	884.1	654.6	167.1	9.1	1.000210	
10000.0	711.8	8.5	-11.2	23.4	879.2	654.0	165.2	8.2	1.000208	
10200.0	706.6	8.0	-11.5	23.7	874.3	653.4	163.2	7.2	1.000207	
10400.0	701.4	7.5	-11.8	23.9	869.4	652.8	160.0	6.7	1.000206	
10600.0	696.2	7.0	-12.1	24.2	864.6	652.2	156.7	6.3	1.000204	
10800.0	691.1	6.6	-12.4	24.5	859.8	651.6	154.4	5.7	1.000203	
11000.0	686.0	6.1	-12.7	24.8	855.0	651.0	152.6	5.2	1.000202	
11200.0	681.0	5.6	-12.9	25.0	850.3	650.5	150.2	4.8	1.000200	
11400.0	676.0	5.1	-13.2	25.3	845.5	649.9	146.3	4.6	1.000199	
11600.0	671.0	4.6	-13.5	25.6	840.8	649.3	142.4	4.5	1.000193	
11800.0	666.1	4.1	-13.8	25.9	836.2	648.7	138.8	3.3	1.000197	
12000.0	661.2	3.6	-14.1	26.1	831.5	648.1	122.7	2.0	1.000195	
12200.0	656.3	3.1	-14.4	26.4	826.9	647.5	121.4	1.3	1.000194	
12400.0	651.5	2.6	-14.7	26.7	822.4	646.9	131.0	1.4	1.000193	
12600.0	646.7	2.1	-15.0	27.0	817.8	646.3	140.7	1.5	1.000192	
12800.0	642.0	1.6	-15.4	27.2	813.3	645.7	166.1	1.3	1.000191	
13000.0	637.3	1.1	-15.7	27.5	808.8	645.2	193.3	1.2	1.000189	
13200.0	632.6	0.6	-16.0	27.8	804.3	644.6	208.3	1.4	1.000188	
13400.0	627.9	0.1	-16.2	28.4	799.9	644.0	195.6	2.0	1.000187	
13600.0	623.1	-0.5	-16.0	30.0	795.4	643.3	183.0	2.7	1.000186	
13800.0	618.3	-1.1	-15.9	31.5	790.9	642.6	179.7	3.3	1.000185	
14000.0	613.6	-1.6	-15.8	33.1	786.5	642.0	179.3	3.8	1.000184	
14200.0	608.9	-2.2	-15.7	34.7	782.1	641.3	179.9	4.4	1.000184	
14400.0	604.3	-2.7	-15.7	36.3	777.7	640.7	182.9	5.3	1.000183	
14600.0	599.7	-3.3	-15.7	37.9	773.3	640.0	186.0	6.2	1.000182	
14800.0	595.1	-3.9	-15.7	39.5	769.0	639.3	193.0	7.1	1.000181	
15000.0	590.5	-4.4	-15.7	41.1	764.7	638.7	201.3	8.0	1.000180	
15200.0	586.0	-5.0	-15.8	42.6	760.5	638.0	209.8	9.0	1.000179	
15400.0	581.5	-5.5	-16.2	42.7	756.1	637.4	218.7	10.3	1.000178	
15600.0	576.9	-6.0	-16.8	42.3	751.6	636.8	227.6	11.7	1.000176	



STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1100 HRS MDT  
ASCENSION NO. 397

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
15800.0	572.5	-6.5	-17.4	41.9	747.2	636.2	232.2	232.2	12.6	1.000175
16000.0	568.0	-7.0	-18.0	41.5	742.8	635.6	236.0	236.0	13.5	1.000173
16200.0	563.6	-7.5	-18.5	41.0	738.4	634.9	238.9	238.9	14.3	1.000172
16400.0	559.2	-8.0	-19.1	40.6	734.1	634.3	240.5	240.5	15.1	1.000171
16600.0	554.8	-8.5	-19.7	40.2	729.8	633.7	242.1	242.1	15.8	1.000170
16800.0	550.5	-9.0	-20.3	39.8	725.5	633.1	243.3	243.3	16.0	1.000168
17000.0	546.2	-9.5	-20.8	39.4	721.3	632.5	244.5	244.5	16.0	1.000167
17200.0	542.0	-10.0	-21.4	39.0	717.0	631.9	246.3	246.3	16.3	1.000166
17400.0	537.7	-10.2	-23.2	33.8	712.1	631.6	249.0	249.0	16.9	1.000164
17600.0	533.5	-10.5	-25.3	28.7	707.2	631.3	251.8	251.8	17.4	1.000162
17800.0	529.3	-10.7	-27.6	23.5	702.3	630.9	254.4	254.4	17.9	1.000160
18000.0	525.1	-10.9	-30.5	18.4	697.5	630.6	257.0	257.0	18.4	1.000158
18200.0	521.0	-11.1	-31.5	16.9	692.5	630.4	259.4	259.4	18.7	1.000157
18400.0	516.9	-11.3	-31.7	16.7	687.4	630.2	261.2	261.2	18.9	1.000155
18600.0	512.8	-11.4	-31.9	16.6	682.3	630.1	263.1	263.1	19.1	1.000154
18800.0	508.7	-11.5	-32.1	16.5	677.3	629.9	263.9	263.9	18.7	1.000153
19000.0	504.7	-11.7	-32.3	16.3	672.3	629.7	264.4	264.4	18.1	1.000152
19200.0	500.7	-11.8	-32.6	16.2	667.4	629.5	264.9	264.9	17.4	1.000151
19400.0	496.7	-12.0	-32.8	16.0	662.5	629.4	266.0	266.0	16.8	1.000150
19600.0	492.7	-12.4	-32.6	16.9	658.3	628.8	267.0	267.0	16.1	1.000149
19800.0	488.7	-13.0	-32.4	18.0	654.3	628.2	266.7	266.7	15.5	1.000148
20000.0	484.8	-13.5	-32.2	19.1	650.3	627.5	264.6	264.6	14.9	1.000147
20200.0	480.9	-14.0	-32.1	20.2	646.4	626.9	262.4	262.4	14.4	1.000146
20400.0	477.0	-14.6	-32.0	21.3	642.4	626.2	259.3	259.3	14.8	1.000145
20600.0	473.1	-15.1	-31.9	22.5	638.5	625.6	256.0	256.0	15.4	1.000145
20800.0	469.3	-15.6	-31.9	23.6	634.7	625.0	252.9	252.9	16.0	1.000144
21000.0	465.5	-16.2	-31.9	24.7	630.8	624.3	251.0	251.0	16.3	1.000143
21200.0	461.7	-16.7	-31.9	25.8	627.0	623.7	249.1	249.1	16.6	1.000142
21400.0	457.9	-17.2	-31.9	26.9	623.2	623.0	247.9	247.9	17.0	1.000141
21600.0	454.2	-17.8	-32.0	28.0	619.5	622.4	247.4	247.4	17.5	1.000140

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1100 HRS MDT  
ASCENSION NO. 397

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
21800.0	450.6	-18.3	29.1	615.7	621.7	246.9	17.9	1.000140
22000.0	446.9	-18.8	30.2	612.0	621.1	247.3	17.8	1.000139
22200.0	443.3	-19.4	31.3	608.4	620.4	247.8	17.6	1.000138
22400.0	439.7	-19.9	32.5	604.7	619.8	248.5	17.4	1.000137
22600.0	436.1	-20.4	33.6	601.1	619.1	250.2	17.8	1.000136
22800.0	432.6	-21.0	34.7	597.5	618.5	252.0	18.2	1.000135
23000.0	429.1	-21.5	35.8	593.9	617.8	252.8	18.7	1.000135
23200.0	425.6	-22.0	36.9	590.3	617.1	252.9	18.3	1.000134
23400.0	422.2	-22.6	38.0	586.8	616.5	253.0	19.2	1.000133
23600.0	418.7	-23.1	39.1	583.3	615.8	253.0	19.6	1.000132
23800.0	415.3	-23.6	40.2	579.8	615.2	252.9	20.0	1.000131
24000.0	412.0	-24.0	41.6	576.0	614.7	252.7	20.4	1.000130
24200.0	408.5	-24.2	43.6	571.6	614.5	251.8	20.8	1.000130
24400.0	405.1	-24.4	45.6	567.2	614.3	251.0	21.1	1.000129
24600.0	401.8	-24.5	47.6	562.8	614.1	251.2	21.7	1.000128
24800.0	398.4	-24.7	49.5	558.5	613.9	252.1	22.3	1.000127
25000.0	395.1	-24.9	50.8	554.4	613.6	253.0	23.0	1.000126
25200.0	391.8	-25.4	50.0	550.8	613.0	253.6	23.9	1.000125
25400.0	388.5	-25.8	49.2	547.2	612.5	254.2	24.8	1.000124
25600.0	385.3	-26.3	48.4	543.6	611.9	254.7	25.6	1.000123
25800.0	382.1	-26.7	47.5	540.0	611.3	255.0	26.5	1.000122
26000.0	378.9	-27.2	46.7	536.5	610.8	255.3	27.4	1.000121
26200.0	375.7	-27.6	46.0	533.0	610.2	254.2	28.1	1.000121
26400.0	372.4	-28.1	45.7	529.3	609.7	252.4	28.6	1.000120
26600.0	369.2	-28.5	45.4	525.7	609.1	250.6	29.2	1.000119
26800.0	366.0	-28.9	45.1	522.1	608.6	249.9	29.6	1.000118
27000.0	362.9	-29.4	44.8	518.5	608.0	249.1	30.0	1.000117
27200.0	359.7	-29.8	44.5	514.9	607.5	248.3	30.5	1.000116
27400.0	356.6	-30.2	44.2	511.4	606.9	247.3	31.0	1.000115
27600.0	353.5	-30.7	43.9	507.9	606.4	246.4	31.6	1.000114

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1100 HRS  
ASCENSION NO. 357

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL-HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
27800.0	350.5	-31.1	43.6	504.4	605.8	246.7	31.6	1.000114
28000.0	347.4	-31.5	43.3	500.9	605.3	247.7	31.3	1.000113
28200.0	344.4	-32.0	43.0	497.5	604.8	248.8	30.9	1.000112
28400.0	341.5	-32.4	42.7	494.1	604.2	249.2	30.5	1.000111
28600.0	338.5	-32.8	42.5	490.7	603.7	249.5	30.1	1.000110
28800.0	335.6	-33.3	42.2	487.3	603.1	249.9	29.7	1.000110
29000.0	332.7	-33.7	41.9	484.0	602.6	250.3	29.6	1.000109
29200.0	329.8	-34.1	41.6	480.7	602.0	250.7	29.5	1.000108
29400.0	326.9	-34.6	41.3	477.4	601.5	250.9	29.5	1.000107
29600.0	324.1	-35.0	41.0	474.1	600.9	250.9	29.5	1.000106
29800.0	321.3	-35.4	40.7	470.8	600.4	250.8	29.6	1.000106
30000.0	318.5	-35.9	40.4	467.7	599.8	251.1	30.4	1.000105
30200.0	315.8	-36.3	40.1	464.5	599.3	251.4	31.4	1.000104
30400.0	313.0	-36.7	39.8	461.3	598.7	251.6	32.3	1.000103
30600.0	310.3	-37.2	39.5	458.2	598.2	251.1	33.1	1.000103
30800.0	307.7	-37.6	39.2	455.0	597.6	250.5	33.9	1.000102
31000.0	305.0	-38.0	38.9	451.9	597.1	250.4	35.2	1.000101
31200.0	302.4	-38.5	38.6	448.9	596.5	250.8	37.0	1.000101
31400.0	299.7	-38.9	38.3	445.8	596.0	251.2	38.7	1.000100
31600.0	297.2	-39.3	38.1	442.8	595.4	250.6	40.8	1.000099
31800.0	294.6	-39.8	37.8	439.7	594.9	249.8	42.8	1.000098
32000.0	292.0	-40.2	37.5	436.8	594.3	249.4	44.6	1.000098
32200.0	289.5	-40.6	37.2	433.8	593.8	249.8	45.7	1.000097
32400.0	286.9	-41.1	36.6**	430.8	593.2	250.2	46.7	1.000096
32600.0	284.3	-41.6	35.7**	427.7	592.6	250.5	47.9	1.000096
32800.0	281.6	-42.1	34.8**	424.6	591.9	250.8	49.2	1.000095
33000.0	279.0	-42.5	33.9**	421.5	591.3	251.0	50.5	1.000094
33200.0	276.4	-43.0	33.0**	418.5	590.7	251.6	50.7	1.000094
33400.0	273.9	-43.5	32.1**	415.5	590.1	252.3	50.9	1.000093
33600.0	271.3	-44.0	31.2**	412.5	589.5	252.5	51.4	1.000092

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1100 HRS .MDT  
ASCENSION NO. 357

UPPER AIR DATA  
1250020397  
WHITE SANDS

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
33800.0	268.8	-44.5	-55.0	30.3**	409.5	588.8		252.3	52.0	1.000091
34000.0	266.3	-45.0	-55.7	29.4**	406.6	588.2		252.2	52.6	1.000091
34200.0	263.8	-45.4	-56.4	28.5**	403.7	587.6		251.3	53.5	1.000090
34400.0	261.4	-45.9	-57.1	27.6**	400.8	587.0		250.3	54.4	1.000089
34600.0	259.0	-46.4	-57.8	26.6**	397.9	586.3		249.7	55.0	1.000089
34800.0	256.6	-46.9	-58.5	25.7**	395.1	585.7		249.5	55.0	1.000088
35000.0	254.2	-47.4	-59.2	24.8**	392.2	585.1		249.4	54.9	1.000087
35200.0	251.8	-47.9	-59.9	23.9**	389.4	584.4		249.3	55.8	1.000087
35400.0	249.5	-48.3	-60.6	23.0**	386.6	583.8		249.1	57.0	1.000086
35600.0	247.2	-48.8	-61.4	22.1**	383.9	583.2		249.1	58.1	1.000086
35800.0	244.9	-49.3	-62.1	21.2**	381.1	582.6		249.5	58.3	1.000085
36000.0	242.6	-49.8	-62.9	20.3**	378.4	581.9		250.0	58.4	1.000084
36200.0	240.3	-50.3	-63.6	19.4**	375.7	581.3		250.4	59.1	1.000084
36400.0	238.1	-50.8	-64.4	18.5**	373.1	580.7		250.8	60.4	1.000083
36600.0	235.9	-51.3	-65.2	17.6**	370.4	580.0		251.2	61.7	1.000083
36800.0	233.7	-51.7	-66.0	16.6**	367.8	579.4		252.1	61.5	1.000082
37000.0	231.5	-52.2	-66.8	15.7**	365.1	578.8		253.3	60.8	1.000081
37200.0	229.4	-52.7	-67.6	14.8**	362.5	578.1		254.5	60.0	1.000081
37400.0	227.3	-53.2	-68.5	13.9**	360.0	577.5		254.6	59.2	1.000080
37600.0	225.2	-53.7	-69.4	13.0**	357.4	576.9		254.7	58.5	1.000080
37800.0	223.1	-54.2	-70.3	12.1**	354.9	576.2		254.8	57.8	1.000079
38000.0	221.0	-54.6	-71.2	11.2**	352.4	575.6		254.5	57.9	1.000078
38200.0	218.9	-55.1	-72.2	10.3**	349.9	574.9		254.3	58.0	1.000078
38400.0	216.9	-55.6	-73.2	9.4**	347.4	574.3		254.0	58.1	1.000077
38600.0	214.9	-56.1	-74.3	8.5**	344.9	573.7		253.2	58.3	1.000077
38800.0	212.9	-56.6	-75.4	7.6**	342.5	573.0		252.3	58.5	1.000076
39000.0	210.9	-57.1	-76.6	6.7**	340.1	572.4		251.4	58.7	1.000076
39200.0	209.0	-57.5	-77.9	5.7**	337.7	571.8		252.0	60.9	1.000075
39400.0	207.0	-58.0	-79.4	4.8**	335.3	571.1		252.7	63.3	1.000075
39600.0	205.1	-58.5	-81.0	3.9**	332.9	570.5		253.4	65.7	1.000074

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3585.00 FEET MSL  
5 MAY 70  
ASCENSION NO. 397

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
489580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF		WIND DATA DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			SOUND KNOTS				
39800.0	203.2	-59.0	-82.9	3.0**	330.6	569.8	254.3		65.4	1.000074
40000.0	201.3	-59.5	-85.3	2.1**	328.3	569.2	255.1		64.6	1.000073
40200.0	199.4	-60.0	-88.8	1.2**	326.0	568.5	256.0		63.7	1.000073
40400.0	197.6	-60.4	-96.4	0.3**	323.7	567.9	256.8		64.3	1.000072
40600.0	195.7	-60.6			320.8	567.7	257.6		65.8	1.000071
40800.0	193.8	-60.6			317.8	567.6	258.4		67.3	1.000071
41000.0	191.9	-60.7			314.7	567.6	259.1		67.2	1.000070
41200.0	190.1	-60.7			311.7	567.5	259.8		65.7	1.000069
41400.0	188.2	-60.7			308.7	567.5	260.4		64.2	1.000069
41600.0	186.4	-60.8			305.7	567.5	260.5		63.6	1.000068
41800.0	184.6	-60.8			302.8	567.4	260.1		64.0	1.000067
42000.0	182.8	-60.8			299.9	567.4	259.7		64.4	1.000067
42200.0	181.0	-61.0			297.3	567.1	259.3		63.7	1.000066
42400.0	179.2	-61.2			294.6	566.9	259.0		61.4	1.000066
42600.0	177.5	-61.4			292.0	566.6	258.7		59.0	1.000065
42800.0	175.7	-61.6			289.4	566.4	258.0		57.0	1.000064
43000.0	174.0	-61.7			286.8	566.2	256.5		55.8	1.000064
43200.0	172.3	-61.9			284.2	565.9	255.0		54.5	1.000063
43400.0	170.6	-62.1			281.7	565.7	253.9		53.6	1.000063
43600.0	168.9	-62.3			279.2	565.4	253.7		53.3	1.000062
43800.0	167.3	-62.5			276.7	565.2	253.5		53.0	1.000062
44000.0	165.7	-62.7			274.2	564.9	253.3		53.0	1.000061
44200.0	164.0	-62.8			271.8	564.7	253.4		53.6	1.000061
44400.0	162.4	-63.0			269.3	564.4	253.4		54.2	1.000060
44600.0	160.8	-63.2			266.9	564.2	253.9		55.3	1.000059
44800.0	159.3	-63.4			264.5	563.9	255.6		57.6	1.000059
45000.0	157.7	-63.6			262.2	563.7	257.3		60.0	1.000058
45200.0	156.2	-63.8			259.8	563.4	258.9		62.1	1.000058
45400.0	154.6	-64.0			257.5	563.2	259.6		63.3	1.000057
45600.0	153.1	-64.1			255.2	562.9	260.3		64.5	1.000057

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
 5 MAY 70 1100 HRS MDT  
 ASCENSION NO. 397  
 UPPER AIR DATA  
 1250020397  
 WHITE SANDS  
 WSTM SITE COORDINATES  
 488580.00 FEET E  
 185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
45800.0	151.6	-64.3		253.0	562.7	260.9	65.7	1.000056
46000.0	150.1	-64.1		250.3	562.9	261.7	66.0	1.000056
46200.0	148.6	-63.7		247.3	563.5	262.5	66.2	1.000055
46400.0	147.2	-63.3		244.3	564.1	263.4	66.4	1.000054
46600.0	145.7	-62.8		241.4	564.7	263.4	65.6	1.000054
46800.0	144.3	-62.4		238.6	565.3	262.9	64.1	1.000053
47000.0	142.9	-62.0		235.8	565.8	262.4	62.5	1.000053
47200.0	141.5	-62.2		233.7	565.5	261.8	60.9	1.000052
47400.0	140.1	-62.4		231.6	565.3	260.6	59.4	1.000052
47600.0	138.7	-62.6		229.5	565.0	259.4	57.9	1.000051
47800.0	137.3	-62.8		227.4	564.8	258.3	56.4	1.000051
48000.0	136.0	-63.0		225.4	564.5	256.7	55.3	1.000050
48200.0	134.6	-63.2		223.4	564.3	255.2	54.3	1.000050
48400.0	133.3	-63.3		221.4	564.0	253.7	53.3	1.000049
48600.0	132.0	-63.5		219.4	563.7	252.6	52.4	1.000049
48800.0	130.7	-63.7		217.4	563.5	251.7	51.5	1.000048
49000.0	129.4	-63.9		215.5	563.2	250.8	50.6	1.000048
49200.0	128.1	-64.1		213.5	563.0	250.3	49.8	1.000048
49400.0	126.8	-64.3		211.6	562.7	250.3	49.4	1.000047
49600.0	125.6	-64.5		209.7	562.5	250.3	48.9	1.000047
49800.0	124.3	-64.7		207.8	562.2	250.6	48.8	1.000046
50000.0	123.1	-64.9		206.0	562.0	252.2	49.9	1.000046
50200.0	121.9	-65.1		204.1	561.7	253.7	50.9	1.000045
50400.0	120.7	-65.2		202.3	561.4	255.2	52.0	1.000045
50600.0	119.5	-65.4		200.5	561.2	256.0	50.9	1.000045
50800.0	118.3	-65.6		198.7	560.9	256.7	49.6	1.000044
51000.0	117.2	-65.8		196.9	560.7	257.4	48.4	1.000044
51200.0	116.0	-66.0		195.1	560.4	258.2	47.3	1.000043
51400.0	114.8	-66.2		193.4	560.2	259.0	46.2	1.000043
51600.0	113.7	-66.4		191.6	559.9	259.8	45.2	1.000043

STATION ALTITUDE 3989.00 FEET MSL  
 5 MAY 70 1100 HRS MDT  
 ASCENSION NO. 397

UPPER AIR DATA  
 1250020397  
 WHITE SANDS

WSTM SITE COORDINATES  
 48580.00 FEET E  
 185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
51800.0	112.6	-66.6			189.9	559.6		260.0	43.5	1.000042
52000.0	111.5	-66.8			188.2	559.4		259.3	41.2	1.000042
52200.0	110.4	-67.0			186.5	559.1		258.6	38.9	1.000042
52400.0	109.3	-67.1			184.8	558.9		257.9	36.8	1.000041
52600.0	108.2	-67.2			183.0	558.8		257.2	36.9	1.000041
52800.0	107.1	-67.2			181.2	558.8		256.5	37.0	1.000040
53000.0	106.0	-67.1			179.4	558.9		255.8	37.0	1.000040
53200.0	105.0	-67.1			177.5	558.9		255.7	36.8	1.000039
53400.0	103.9	-67.1			175.8	558.9		255.8	36.5	1.000039
53600.0	102.9	-67.1			174.0	559.0		255.9	36.2	1.000039
53800.0	101.9	-67.1			172.2	559.0		255.5	36.1	1.000038
54000.0	100.9	-67.0			170.5	559.0		254.9	36.3	1.000038
54200.0	99.9	-67.0			168.8	559.1		254.1	36.5	1.000038
54400.0	98.9	-67.0			167.1	559.1		253.6	36.6	1.000037
54600.0	97.9	-67.0			165.4	559.1		255.3	35.7	1.000037
54800.0	96.9	-66.9			163.7	559.2		257.0	34.9	1.000036
55000.0	95.9	-66.9			162.1	559.2		258.8	34.1	1.000036
55200.0	95.0	-66.9			160.4	559.2		259.6	33.0	1.000036
55400.0	94.0	-66.9			158.8	559.2		260.0	31.8	1.000035
55600.0	93.1	-66.8			157.2	559.3		260.4	30.5	1.000035
55800.0	92.2	-66.8			155.6	559.3		261.1	29.4	1.000035
56000.0	91.2	-66.8			154.0	559.3		262.5	28.5	1.000034
56200.0	90.3	-66.8			152.5	559.4		263.9	27.6	1.000034
56400.0	89.4	-66.8			151.0	559.4		265.4	26.7	1.000034
56600.0	88.5	-66.7			149.4	559.4		268.4	23.8	1.000033
56800.0	87.6	-66.7			147.9	559.5		271.7	20.6	1.000033
57000.0	86.8	-66.7			146.4	559.5		275.0	17.3	1.000033
57200.0	85.5	-66.7			145.0	559.5		276.0	15.7	1.000032
57400.0	85.0	-66.6			143.5	559.5		273.0	16.7	1.000032
57600.0	84.2	-66.6			142.0	559.6		270.1	17.7	1.000032

STATION ALTITUDE 4889.00 FEET MSL  
 5 MAY 70 1100 HRS MDT  
 ASCENSION NO. 297

UPPER AIR DATA  
 1250020297  
 WHITE SANDS

WSTM SITE COORDINATES  
 48890.00 FEET E  
 185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
57800.0	83.4	-66.6			140.6	559.6	267.2	18.7	1.000031
58000.0	82.5	-66.6			139.2	559.6	305.1	17.0	1.000031
58200.0	81.7	-66.6			137.8	559.7	345.9	15.2	1.000031
58400.0	80.9	-66.5			136.4	559.7	26.8	13.5	1.000030
58600.0	80.1	-66.5			135.0	559.7	26.7	15.2	1.000030
58800.0	79.3	-66.5			133.7	559.8	342.9	21.0	1.000030
59000.0	78.5	-66.5			132.3	559.8	299.2	26.7	1.000029
59200.0	77.7	-66.4			131.0	559.8	255.5	32.5	1.000029
59400.0	76.9	-66.4			129.7	559.8	255.5	26.9	1.000029
59600.0	76.2	-66.4			128.3	559.9	256.4	21.2	1.000029
59800.0	75.4	-66.2			127.0	560.1	257.3	15.4	1.000028
60000.0	74.7	-66.0			125.6	560.4	257.3	13.1	1.000028
60200.0	73.9	-65.8			124.2	560.7	255.5	17.1	1.000028
60400.0	73.2	-65.6			122.9	561.0	253.8	21.2	1.000027
60600.0	72.5	-65.4			121.6	561.3	252.0	25.2	1.000027
60800.0	71.8	-65.2			120.2	561.6	250.2	29.2	1.000027
61000.0	71.1	-65.0			118.9	561.8	248.4	33.2	1.000026
61200.0	70.4	-64.7			117.6	562.1	247.8	30.9	1.000026
61400.0	69.7	-64.5			116.4	562.4	247.3	27.2	1.000026
61600.0	69.0	-64.3			115.1	562.7	246.8	23.6	1.000026
61800.0	68.3	-64.1			113.9	563.0	246.3	20.0	1.000025
62000.0	67.6	-63.9			112.6	563.3	245.9	16.4	1.000025
62200.0	67.0	-63.7			111.4	563.6	245.4	12.7	1.000025
62400.0	66.3	-63.5			110.2	563.8	244.9	9.1	1.000025
62600.0	65.7	-63.2			109.0	564.1	244.7	7.8	1.000024
62800.0	65.0	-63.0			107.8	564.4	244.9	9.1	1.000024
63000.0	64.4	-62.8			106.6	564.7	245.0	10.4	1.000024
63200.0	63.7	-62.6			105.5	565.0	245.1	11.7	1.000023
63400.0	63.1	-62.4			104.3	565.3	245.2	13.0	1.000023
63600.0	62.5	-62.2			103.2	565.6	245.4	14.3	1.000023



STATION ALTITUDE 3589.00 FEET MSL  
5 MAY 70 1100 HRS MDY  
ASCENSION NO. 357

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTN SITE COORDINATES  
480580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont.)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
63800.0	61.9	-62.0			102.1	565.9		245.5	15.6	1.000023
64000.0	61.3	-61.8			101.0	566.1		245.3	16.5	1.000022
64200.0	60.7	-61.5			99.9	566.4		243.2	14.8	1.000022
64400.0	60.1	-61.3			98.8	566.7		241.0	13.2	1.000022
64600.0	59.5	-61.4			97.9	566.6		238.8	11.5	1.000022
64800.0	58.9	-61.6			97.0	566.4		236.7	9.9	1.000022
65000.0	58.3	-61.7			96.1	566.2		234.5	8.2	1.000021
65200.0	57.8	-61.8			95.2	566.1		232.4	6.5	1.000021
65400.0	57.2	-62.0			94.4	565.9		230.2	4.9	1.000021
65600.0	56.7	-61.9			93.4	566.0		228.2	4.6	1.000021
65800.0	56.1	-61.7			92.5	566.2		226.2	4.3	1.000021
66000.0	55.6	-61.5			91.5	566.5		224.2	4.1	1.000020
66200.0	55.1	-61.3			90.5	566.8		222.2	3.8	1.000020
66400.0	54.5	-61.1			89.6	567.1		220.2	3.6	1.000020
66600.0	54.0	-60.9			88.7	567.3		218.2	3.3	1.000020
66800.0	53.5	-60.7			87.7	567.6		216.2	3.0	1.000020
67000.0	53.0	-60.5			86.8	567.9		200.2	3.1	1.000019
67200.0	52.5	-60.2			85.9	568.2		184.0	3.2	1.000019
67400.0	52.0	-60.0			85.0	568.4		167.9	3.2	1.000019
67600.0	51.5	-59.8			84.1	568.7		151.7	3.3	1.000019
67800.0	51.0	-59.6			83.2	569.0		135.6	3.3	1.000019
68000.0	50.5	-59.4			82.4	569.2		119.4	3.4	1.000018
68200.0	50.0	-59.2			81.5	569.5		103.3	3.5	1.000018
68400.0	49.6	-59.0			80.7	569.8		100.1	3.4	1.000018
68600.0	49.1	-58.8			79.8	570.0		97.9	3.4	1.000018
68800.0	48.6	-58.6			79.0	570.3		95.7	3.4	1.000018
69000.0	48.2	-58.4			78.2	570.6		93.6	3.4	1.000017
69200.0	47.7	-58.2			77.3	570.9		91.4	3.3	1.000017
69400.0	47.3	-58.0			76.5	571.1		89.2	3.3	1.000017
69600.0	46.8	-57.8			75.7	571.4		87.1	3.3	1.000017

STATION ALTITUDE 5889.00 FEET MSL  
5 MAY 70 1100 HRS -MDT.  
ASCENSION NO. 357

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX	
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	UF	REFRACTION
69800.0	44.4	-57.6			75.0	571.7		100.1	3.4		1.000017
70000.0	45.9	-57.4			74.2	571.9		115.6	3.6		1.000017
70200.0	45.5	-57.2			73.4	572.2		131.1	3.7		1.000016
70400.0	45.1	-57.0			72.6	572.5		146.6	3.9		1.000016
70600.0	44.6	-56.8			71.9	572.7		162.1	4.0		1.000016
70800.0	44.2	-56.6			71.1	573.0		177.6	4.2		1.000016
71000.0	43.8	-56.4			70.4	573.3		193.1	4.3		1.000016
71200.0	43.4	-56.2			69.7	573.5		190.1	4.5		1.000016
71400.0	43.0	-56.0			68.9	573.8		181.3	4.7		1.000015
71600.0	42.6	-55.8			68.2	574.1		172.5	4.9		1.000015
71800.0	42.1	-55.6			67.5	574.4		163.8	5.2		1.000015
72000.0	41.7	-55.4			66.8	574.6		155.0	5.4		1.000015
72200.0	41.4	-55.2			66.1	574.9		146.2	5.6		1.000015
72400.0	41.0	-55.0			65.4	575.2		137.4	5.8		1.000015
72600.0	40.6	-54.8			64.7	575.4		131.1	6.2		1.000014
72800.0	40.2	-54.6			64.1	575.7		126.4	6.6		1.000014
73000.0	39.8	-54.4			63.4	576.0		121.7	7.0		1.000014
73200.0	39.4	-54.2			62.7	576.2		117.0	7.4		1.000014
73400.0	39.1	-53.9			62.1	576.5		112.2	7.9		1.000014
73600.0	38.7	-53.7			61.4	576.8		107.5	8.3		1.000014
73800.0	38.3	-53.5			60.8	577.0		102.8	8.7		1.000014
74000.0	37.9	-53.3			60.2	577.3		99.0	9.3		1.000013
74200.0	37.6	-53.1			59.5	577.6		96.2	10.2		1.000013
74400.0	37.2	-52.9			58.9	577.8		93.5	11.1		1.000013
74600.0	36.9	-52.7			58.3	578.1		90.8	12.0		1.000013
74800.0	36.5	-52.5			57.7	578.4		88.1	12.9		1.000013
75000.0	36.2	-52.3			57.1	578.6		85.4	13.8		1.000013
75200.0	35.8	-52.1			56.5	578.9		82.7	14.7		1.000013
75400.0	35.5	-51.9			55.9	579.2		80.6	15.3		1.000012
75600.0	35.2	-51.7			55.3	579.4		80.1	15.1		1.000012

STATION ALTITUDE 3989.00 FEET MSL  
5 MAY 70 1100 HRS  
ASCENSION NO. 397

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
48580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
7500.0	34.8	-51.5		54.7	579.7	79.7	14.9	1.000012
7600.0	34.5	-51.3		54.2	580.0	79.3	14.8	1.000012
7620.0	34.2	-51.1		53.6	580.2	78.9	14.6	1.000012
7640.0	33.8	-51.0		53.1	580.3	78.5	14.4	1.000012
7660.0	33.5	-51.1		52.6	580.2	78.1	14.3	1.000012
7680.0	33.2	-51.2		52.2	580.1	77.7	14.1	1.000012
7700.0	32.9	-51.3		51.7	579.9	79.5	13.8	1.000012
7720.0	32.6	-51.4		51.2	579.8	81.4	13.5	1.000011
7740.0	32.3	-51.5		50.8	579.7	83.3	13.2	1.000011
7760.0	32.0	-51.6		50.3	579.6	85.2	12.9	1.000011
7780.0	31.7	-51.7		49.9	579.4	87.0	12.6	1.000011
7800.0	31.4	-51.8		49.4	579.3	88.9	12.4	1.000011
7820.0	31.1	-51.9		49.0	579.2	90.8	12.1	1.000011
7840.0	30.8	-52.0		48.6	579.1	93.3	11.9	1.000011
7860.0	30.5	-52.1		48.1	578.9	96.2	11.8	1.000011
7880.0	30.3	-52.2		47.7	578.8	99.1	11.7	1.000011
7900.0	30.0	-52.3		47.3	578.7	102.0	11.7	1.000011
7920.0	29.7	-52.4		46.9	578.6	104.9	11.6	1.000010
7940.0	29.4	-52.5		46.5	578.5	107.8	11.5	1.000010
7960.0	29.2	-52.5		46.0	578.3	110.7	11.4	1.000010
7980.0	28.9	-52.4		45.6	578.5	113.2	11.3	1.000010
8000.0	28.6	-52.1		45.1	578.9	115.0	11.3	1.000010
8020.0	28.4	-51.7		44.6	579.4	116.8	11.3	1.000010
8040.0	28.1	-51.4		44.1	579.8	118.6	11.2	1.000010
8060.0	27.8	-51.1		43.7	580.3	120.5	11.2	1.000010
8080.0	27.6	-50.7		43.2	580.7	122.3	11.2	1.000010
8100.0	27.3	-50.4		42.7	581.2	124.1	11.1	1.000010
8120.0	27.1	-50.0		42.3	581.7	125.9	11.1	1.000009
8140.0	26.8	-49.7		41.8	582.1	127.3	11.0	1.000009
8160.0	26.6	-49.3		41.4	582.6	127.6	10.9	1.000009

STATION ALTITUDE 3589.00 FEET MSL  
5 MAY 70  
ASCENSION NO. 357

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX UP REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
81800.0	26.3	-49.0			40.9	583.0	127.8	10.7	1.000009
82000.0	26.1	-48.6			40.5	583.5	128.0	10.6	1.000009
82200.0	25.8	-48.3			40.0	583.9	128.3	10.4	1.000009
82400.0	25.6	-47.9			39.6	584.4	128.5	10.3	1.000009
82600.0	25.4	-47.6			39.2	584.8	128.7	10.1	1.000009
82800.0	25.1	-47.2			38.8	585.3	128.9	10.0	1.000009
83000.0	24.9	-47.0			38.4	585.6	129.2	9.8	1.000009
83200.0	24.7	-47.0			38.0	585.6	129.1	9.6	1.000008
83400.0	24.5	-47.0			37.7	585.6	128.7	9.2	1.000008
83600.0	24.2	-47.0			37.3	585.6	128.3	8.7	1.000008
83800.0	24.0	-47.0			37.0	585.6	127.9	8.3	1.000008
84000.0	23.8	-47.0			36.7	585.6	127.4	7.9	1.000008
84200.0	23.6	-47.0			36.3	585.6	127.0	7.5	1.000008
84400.0	23.4	-47.0			36.0	585.6	126.6	7.1	1.000008
84600.0	23.2	-47.0			35.7	585.6	126.2	6.7	1.000008
84800.0	22.9	-47.0			35.4	585.6	125.7	6.3	1.000008
85000.0	22.7	-47.0			35.0	585.6	124.2	6.2	1.000008
85200.0	22.5	-47.0			34.7	585.6	121.7	6.3	1.000008
85400.0	22.3	-47.0			34.4	585.6	119.2	6.5	1.000008
85600.0	22.1	-47.0			34.1	585.6	116.8	6.6	1.000008
85800.0	21.9	-47.0			33.8	585.6	114.3	6.8	1.000008
86000.0	21.7	-47.0			33.5	585.6	111.8	6.9	1.000007
86200.0	21.5	-47.0			33.2	585.6	109.3	7.1	1.000007
86400.0	21.3	-47.0			32.9	585.6	106.9	7.2	1.000007
86600.0	21.1	-47.0			32.6	585.6	104.4	7.4	1.000007
86800.0	20.9	-47.0			32.3	585.6	105.1	7.3	1.000007
87000.0	20.8	-46.9			32.0	585.7	107.8	7.0	1.000007
87200.0	20.6	-46.8			31.7	585.8	110.5	6.7	1.000007
87400.0	20.4	-46.7			31.4	585.9	113.2	6.4	1.000007
87600.0	20.2	-46.6			31.1	586.0	115.8	6.1	1.000007

STATION ALTITUDE 3989.00 FEET MSL  
 5 MAY 70 1100 HRS MDT  
 ASCENSION NO. 397

UPPER AIR DATA  
 1250020397  
 WHITE SANDS

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
87800.0	20.0	-46.6		30.8	586.1	118.5	5.8	1.000007
88000.0	19.8	-46.5		30.5	586.2	121.2	5.6	1.000007
88200.0	19.7	-46.4		30.2	586.3	123.9	5.3	1.000007
88400.0	19.5	-46.3		29.9	586.5	126.5	5.0	1.000007
88600.0	19.3	-46.2		29.7	586.6	127.5	5.0	1.000007
88800.0	19.1	-46.1		29.4	586.7	127.4	5.1	1.000007
89000.0	19.0	-46.1		29.1	586.8	127.3	5.2	1.000006
89200.0	18.8	-46.0		28.8	586.9	127.2	5.3	1.000006
89400.0	18.6	-45.9		28.6	587.0	127.1	5.4	1.000006
89600.0	18.5	-45.8		28.3	587.1	127.1	5.5	1.000006
89800.0	18.3	-45.7		28.0	587.2	127.0	5.6	1.000006
90000.0	18.1	-45.6		27.8	587.3	126.9	5.8	1.000006
90200.0	18.0	-45.6		27.5	587.4	125.8	5.9	1.000006
90400.0	17.8	-45.5		27.3	587.5	128.9	5.8	1.000006
90600.0	17.7	-45.4		27.0	587.6	132.4	5.7	1.000006
90800.0	17.5	-45.3		26.8	587.7	135.8	5.6	1.000006
91000.0	17.3	-45.2		26.5	587.9	139.3	5.5	1.000006
91200.0	17.2	-45.1		26.3	588.0	142.8	5.4	1.000006
91400.0	17.0	-45.1		26.0	588.1	146.3	5.3	1.000006
91600.0	16.9	-45.0		25.8	588.2	149.8	5.2	1.000006
91800.0	16.7	-44.9		25.5	588.3	153.3	5.1	1.000006
92000.0	16.6	-44.8		25.3	588.4	156.7	5.0	1.000006
92200.0	16.4	-44.7		25.1	588.5	157.3	5.1	1.000006
92400.0	16.3	-44.6		24.8	588.6	155.8	5.2	1.000006
92600.0	16.1	-44.6		24.6	588.7	154.3	5.3	1.000005
92800.0	16.0	-44.5		24.4	588.8	152.7	5.4	1.000005
93000.0	15.8	-44.4		24.1	588.9	151.2	5.5	1.000005
93200.0	15.7	-44.3		23.9	589.0	149.7	5.6	1.000005
93400.0	15.6	-44.2		23.7	589.1	148.2	5.7	1.000005
93600.0	15.4	-44.1		23.5	589.3	146.6	5.8	1.000005

STATION ALTITUDE 3585.00 FEET MSL  
5 MAY 70 1100 HRS MDT  
ASCENSION NO. 357

UPPER AIR DATA  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
93800.0	15.3	-44.1			23.2	589.4	145.1	5.9	1.000005
94000.0	15.1	-44.0			23.0	589.5	143.0	6.2	1.000005
94200.0	15.0	-43.9			22.8	589.6	140.4	6.6	1.000005
94400.0	14.9	-43.8			22.6	589.7	137.7	6.9	1.000005
94600.0	14.7	-43.7			22.4	589.8	135.1	7.3	1.000005
94800.0	14.6	-43.6			22.2	589.9	132.5	7.7	1.000005
95000.0	14.5	-43.6			22.0	590.0	129.9	8.1	1.000005
95200.0	14.4	-43.5			21.8	590.1	127.3	8.4	1.000005
95400.0	14.2	-43.4			21.6	590.2	124.7	8.8	1.000005
95600.0	14.1	-43.3			21.4	590.3	122.1	9.2	1.000005
95800.0	14.0	-43.2			21.2	590.4	121.1	9.1	1.000005
96000.0	13.8	-43.1			21.0	590.5	121.5	8.8	1.000005
96200.0	13.7	-43.0			20.8	590.7	122.0	8.4	1.000005
96400.0	13.6	-43.0			20.6	590.8	122.4	8.0	1.000005
96600.0	13.5	-42.9			20.4	590.9	122.8	7.6	1.000005
96800.0	13.4	-42.8			20.2	591.0	123.2	7.3	1.000004
97000.0	13.2	-42.7			20.0	591.1	123.6	6.9	1.000004
97200.0	13.1	-42.6			19.8	591.2	124.0	6.5	1.000004
97400.0	13.0	-42.5			19.6	591.3	124.4	6.1	1.000004
97600.0	12.9	-42.5			19.5	591.4			1.000004
97800.0	12.8	-42.4			19.3	591.5			1.000004
98000.0	12.7	-42.3			19.1	591.6			1.000004
98200.0	12.5	-42.2			18.9	591.7			1.000004
98400.0	12.4	-42.1			18.7	591.8			1.000004
98600.0	12.3	-42.0			18.6	591.9			1.000004
98800.0	12.2	-42.0			18.4	592.0			1.000004
99000.0	12.1	-41.9			18.2	592.2			1.000004
99200.0	12.0	-41.8			18.1	592.3			1.000004
99400.0	11.9	-41.7			17.9	592.4			1.000004
99600.0	11.8	-41.6			17.7	592.5			1.000004

STATION ALTITUDE 3989.00 FEET MSL  
 5 MAY 70 1100 HRS EDT  
 ASCENSION NO. 397

UPPER AIR DATA  
 1250020397  
 WHITE SANDS

MSTM SITE COORDINATES  
 488580.00 FEET E  
 185045.00 FEET N

TABLE XVIII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
99800.0	11.7	-41.5		17.6	592.6			1.000004
100000.0	11.6	-41.5		17.4	592.7			1.000004
100200.0	11.5	-41.4		17.2	592.8			1.000004
100400.0	11.4	-41.3		17.1	592.9			1.000004
100600.0	11.3	-41.2		16.9	593.0			1.000004
100800.0	11.2	-41.1		16.7	593.1			1.000004
101000.0	11.1	-41.0		16.6	593.2			1.000004

STATION ALTITUDE 3589.00 FEET MSL  
5 MAY 70 1100 HRS MDT  
ASCENSION NO. 357

MANDATORY LEVELS  
1250020397  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE XIX

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5138.	18.7	-5.1	19.	95.6	4.2
800.0	6831.	16.4	-7.3	19.	165.8	13.6
750.0	8616.	12.1	-9.4	21.	170.2	12.9
700.0	10495.	7.4	-11.9	24.	158.4	6.5
650.0	12477.	2.4	-14.8	27.	135.1	1.4
600.0	14578.	-3.2	-15.7	38.	185.8	6.1
550.0	16812.	-9.1	-20.3	40.	243.5	16.0
500.0	19216.	-11.9	-32.6	16.	265.1	17.3
450.0	21831.	-18.4	-32.0	29.	246.9	18.0
400.0	24675.	-24.6	-32.5	49.	251.7	22.0
350.0	27824.	-31.2	-39.7	44.	247.0	31.5
300.0	31352.	-38.9	-47.9	38.	251.2	38.7
250.0	35376.	-48.2	-60.5	23.**	249.1	57.2
200.0	40075.	-59.8	-87.6	1.**	255.8	63.9
175.0	42799.	-61.6			257.4	56.5
150.0	45911.	-64.1			261.8	66.0
125.0	49590.	-64.6			250.3	48.7
100.0	54024.	-67.0			254.3	36.4
80.0	58450.	-66.5			23.7	15.6
70.0	61110.	-64.6			247.5	29.3
60.0	64223.	-61.3			240.8	13.0
50.0	67942.	-59.2			106.2	3.4
40.0	72581.	-54.5			125.6	6.7
30.0	78688.	-52.3			101.8	11.7
25.0	82592.	-47.0			129.1	9.9
20.0	87443.	-46.5			118.6	5.8
15.0	93744.	-43.9			140.8	6.5

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.



RELEASE TIME (MDT)		SECOND-STAGE IMPACT DISPLACEMENT IN MILES DUE TO WIND										AZI- MUTH (DE- GREES)	THEORETICAL IMPACT FROM LAUNCHER (IN MILES)				
		11-216 FT				216-4000 FT		4000-71089 FT								TOTAL	
		N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W						
RAWIN- SONDE	PIBAL	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	RANGE	N-S	E-W			
0500	0600	0.0	0.0	9.1S	9.7E	0.0	25.2W	9.1S	15.5W	0.0	25.2W	9.1S	61.9	0.0			
0500	0630	0.0	2.0W	4.6S	5.7E	0.0	25.2W	4.6S	21.5W	0.0	25.2W	4.6S	66.7	6.0W			
0500	0700	0.9N	2.3W	2.6S	2.9E	0.0	25.2W	1.7S	24.6W	0.0	25.2W	1.7S	69.9	9.1W			
0500	0715	0.0	1.8W	3.9S	5.6E	0.0	25.2W	3.9S	21.4W	0.0	25.2W	3.9S	67.4	5.9W			
0500	0730	0.6N	1.7W	3.7S	2.8E	0.0	25.2W	3.1S	24.9W	0.0	25.2W	3.1S	68.5	9.4W			
0500	0740	0.4N	0.4W	3.1S	2.1E	0.0	25.2W	2.7S	23.7W	0.0	25.2W	2.7S	68.8	8.2W			
0500	0750	0.6N	0.3W	3.5S	2.7E	0.0	25.2W	2.9S	22.8W	0.0	25.2W	2.9S	68.5	7.3W			
0500	0755	0.1N	0.0	3.3S	2.1E	0.0	25.2W	3.2S	23.1W	0.0	25.2W	3.2S	68.2	7.6W			
0500	0800	0.0	0.0	2.6S	3.1E	0.0	25.2W	2.6S	23.1W	0.0	25.2W	2.6S	68.8	7.6W			
0800	0800	0.0	0.0	2.6S	3.1E	4.2S	24.6W	6.8S	21.5W	0.0	24.6W	6.8S	64.5	6.0W			

TABLE XX. IMPACT PREDICTION DATA  
NIKE-HYDAC STN-94

	AZI- MUTH (DE- GREES)	MILES FROM LAUNCHER		
		RANGE	N-S	E-W
LAUNCHER SETTING (ELEVATION 84.2 DEGREES QE)	015.6	73.7	71.0N	19.7E
NO WIND IMPACT	12.3	72.7	71.0N	15.5E
PREDICTED SECOND-STAGE IMPACT	352.0	70.0	69.3N	9.7W
SECOND-STAGE IMPACT, RADAR TRACK	351.6	74.3	73.5N	10.9W
PREDICTED BOOSTER IMPACT	020.0	1.3	1.2N	0.4E
ACTUAL BOOSTER IMPACT	NOT TRACKED			

TABLE XX. IMPACT PREDICTION DATA (CONT)  
NIKE-HYDAC STV-94

RELEASE TIME (MDT)		SECOND-STAGE IMPACT DISPLACEMENT IN MILES DUE TO WIND								AZI- MUTH (DE-- GREES)	THEORETICAL IMPACT FROM LAUNCHER (IN MILES)		
		11-216 FT				216-4000 FT							
		N-S		E-W		N-S		E-W					
RAWIN- SONDE	PIBAL	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	RANGE	N-S	E-W	
0800	0900	0.3N	2.9E	5.4S	3.7E	5.6S	31.6W	10.7S	25.0W	354.9	67.7	67.4N	6.1W
0800	0930	2.5N	2.8E	4.3S	4.2E	5.6S	31.6W	7.4S	24.6W	355.4	70.9	70.7N	5.7W
0800	1000	0.8N	1.1E	3.5S	3.0E	5.6S	31.6W	8.3S	27.5W	353.0	70.3	69.8N	8.6W
0800	1015	2.9N	2.4E	3.3S	2.9E	5.6S	31.6W	6.0S	26.3W	354.1	72.5	72.1N	7.4W
0800	1030	0.0	0.0	2.6S	2.5E	5.6S	31.6W	8.2S	29.1W	351.7	70.6	69.9N	10.2W
0800	1040	2.3N	1.1E	2.4S	4.2E	5.6S	31.6W	5.7S	25.3W	355.0	72.7	72.4N	6.4W
0800	1050	3.6N	1.5W	1.0N	1.7E	5.6S	31.6W	1.0S	31.4W	351.8	78.2	77.1N	12.5W
0800	1055	0.4N	1.0W	1.0N	3.4E	5.6S	31.6W	4.2S	29.2W	352.1	74.6	73.9N	10.5W
0800	1100	1.5N	1.6W	0.8S	3.7E	5.6S	31.6W	4.9S	29.5W	351.8	74.0	73.2N	10.6W
1100	1100	1.5N	1.6W	0.8S	3.7E	9.2S	29.9W	8.5S	27.8W	352.7	70.2	69.6N	8.9W

TABLE XXI. IMPACT PREDICTION DATA  
NIKE-HYDAC STV-93

	AZI- MUTH (DE- GREES)	MILES FROM LAUNCHER		
		RANGE	N-S	E-W
LAUNCHER SETTING (ELEVATION 84.1 DEGREES QE)	016.5	81.4	78.1N	23.1E
NO WIND IMPACT	013.6	80.7	78.1N	18.9E
PREDICTED SECOND-STAGE IMPACT	352.0	70.0	69.3N	9.7W
SECOND-STAGE IMPACT, RADAR TRACK	351.5	67.3	66.6N	10.0W
PREDICTED BOOSTER IMPACT	022.0	1.4	1.3N	0.5E
ACTUAL BOOSTER IMPACT	NOT TRACKED			

TABLE XXI. IMPACT PREDICTION DATA (CONT)  
NIKE-HYDAC STV-93

UNCLASSIFIED

Security Classification

## DOCUMENT CONTROL DATA - R &amp; D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) U. S. Army Electronics Command Ft. Monmouth, New Jersey		2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	
		2b. GROUP	
3. REPORT TITLE NIKE-HYDAC STV-94, NIKE-HYDAC STV-93 DR-523			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)			
5. AUTHOR(S) (First name, middle initial, last name) Len E. Carter			
6. REPORT DATE May 1970		7a. TOTAL NO. OF PAGES 61	7b. NO. OF REFS 0
8a. CONTRACT OR GRANT NO.		9a. ORIGINATOR'S REPORT NUMBER(S) DR-523	
b. PROJECT NO.		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
c. DA Task 1T665702D127-02			
d.			
10. DISTRIBUTION STATEMENT This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of Atmospheric Sciences Office White Sands Missile Range, New Mexico.			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY U. S. Army Electronics Command Atmospheric Sciences Office White Sands Missile Range, New Mexico	
13. ABSTRACT  Meteorological data gathered for the launching of Nike-Hydac STV-94 and Nike-Hydac STV-93, are presented for the Space and Missile Systems Organization, AFMDC, Holloman Air Force Base, New Mexico, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.			

DD FORM 1473  
1 NOV 65REPLACES DD FORM 1473, 1 JAN 64, WHICH IS  
OBSOLETE FOR ARMY USE.

UNCLASSIFIED

Security Classification

UNCLASSIFIED

Security Classification

14	KEY WORDS		LINK A		LINK B		LINK C	
			ROLE	WT	ROLE	WT	ROLE	WT
	1. Ballistics							
	2. Meteorology							
	3. Wind							

UNCLASSIFIED

**Security Classification**